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GOETHE THE ALCHEMIST

A Study of Alchemical Symbolism in Goethe's Literary and Scientific Works

Ronald Douglas Gray

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Goethe the Alchemist

In his autobiography, Goethe half-apologetically admits the youthful enthusiasm he experienced for alchemical and mystical readings: Georg von Welling's obscure *Opus Mago-Cabbalisticum et Theosophicum* and the anonymously published *Aurea Catena Homeri*, as well as works by Paracelsus, Basilis Valentinus and van Helmont. Originally published in 1952, this study shows how the symbols and concepts of alchemy played a key role in the genesis of Goethe's later works, both scientific and literary. Author of, among other books on German literature, *Goethe: A Critical Introduction* (1967) and *An Introduction to German Poetry* (1965), Ronald D. Gray details Goethe's alchemical readings, and shows how these influences were processed and transformed into a unique blend of scientific and poetic accounts of reality. Unprecedented in its approach, this study will be of interest to readers of German literature, as well as to anyone interested in the history and evolution of mysticism.

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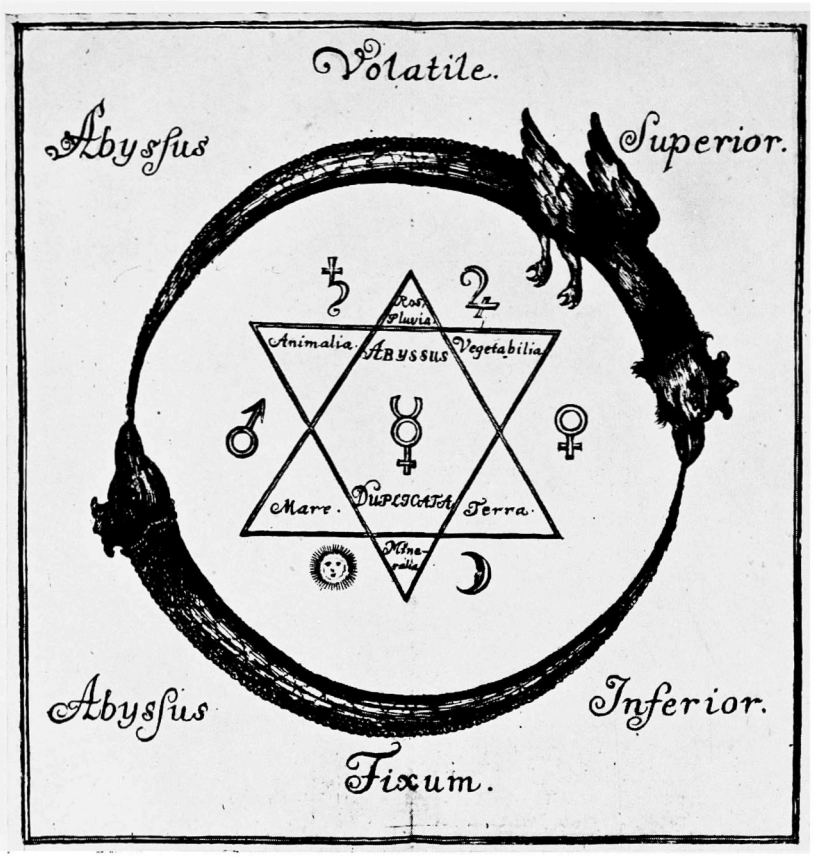
GOETHE
THE ALCHEMIST

PLATE I



First frontispiece of the *Aurea Catena Homeri*, showing the cosmic hexagram surrounded by the symbols of the planets or metals, and by the 'Ourobouros'.

GOETHE
THE ALCHEMIST

A STUDY OF ALCHEMICAL SYMBOLISM IN GOETHE'S LITERARY AND SCIENTIFIC WORKS

BY

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PREFACE

THIS book sets out to show that Goethe was profoundly influenced throughout his life by the religious and philosophical beliefs he derived from his early study of alchemy. Alchemy can be interpreted in many ways: as the art of gold-making, as a symbolical representation of mystical doctrines, or, as in the writings of C. G. Jung, as a projection of the unconscious mind, concerned with the integration of the personality. As Goethe knew it, it was primarily concerned with mysticism. In his hands, however, it underwent some transformation: the mystical aspect became less important, while he attempted to provide more logical, more scientific evidence of the symbolical truth of alchemy.

It is essential to distinguish clearly between alchemy, mysticism, and neo-Platonism. Alchemy was not necessarily mystical, if the word is used, as it was by William James, to indicate a belief in the possibility of ecstatic, ineffable union with the divine such as is often said to be achieved by contemplation. Nor was it identical with neo-Platonism, in spite of its many affinities. That Goethe was influenced by neo-Platonism is an obvious fact, which I do not wish to deny. Alchemy was, however, the form in which he first encountered neo-Platonism, and it is in alchemical symbols that Goethe expresses himself in his scientific works. Equally obvious is the fact that Goethe was not a mystic in the sense that Meister Eckhart and St John of the Cross were mystics. On the other hand, he made practical use of the tenets of mysticism in his day-to-day life, and thereby achieved that inner solidarity and harmony which is one of his claims to fame. His whole striving was, not to reject one world in favour of another, but to combine the two, to find the ideal in the real.

Not all the symbols in this book are exclusively alchemical, though most are. All, however, are closely linked with alchemy, and I have not resisted the urge to include a little more than the title strictly implies.

I need hardly add that, since this is not a biography of Goethe, it does not claim to present more than one aspect of his many-sided personality. There is little here of the serene lover of Greek antiquity. But it is not generally realized that even when his faith in Greece and Rome was strongest, Goethe was still in sympathy with the beliefs, though not the methods, of his occult teachers.

I am deeply indebted to my friend Mr Humphry Trevelyan for his painstaking criticism of the original draft and for his numerous suggestions and comments. It was from a parallel suggested by him that the comparison between Goethe's 'Urpflanze' and Boehme's 'Seven Qualities of God', set out in Chapter Four, was developed. I also acknowledge with gratitude the assistance received from Professor E. M. Butler, and from Professor Emil Staiger of Zürich University. My great indebtedness to the theories of C. G. Jung will be evident from the footnotes. Dr Agnes Arber, author of 'Goethe's Botany', and Dr Marjorie Sweeting, Fellow of Newnham College, have helped me with the botanical and geological sections, and I have relied on Dr Arber's translation of the *Metamorphosis* essay on all points of scientific nomenclature. I thank also the Master and Fellows of Emmanuel College, the Ministry of Education, the London County Council, and the Headmaster and Governors of Emanuel School, Wandsworth, for the grants which made it possible for me to devote my time to this study, and Mrs Herta Quinn for her careful typing of the manuscript. Special thanks are also due to the Syndics of the Cambridge University Press for their willingness to undertake the publication of the book. Above all, I thank my wife for making it possible for me to write it.

The original texts of quotations made in translation in my narrative will be found at the end of the book, together with references to literature. The bracketted figures in the narrative refer to these notes.

R. D. G.

CAMBRIDGE
14 *March* 1951

PART I:

ALCHEMY

CHAPTER I

ALCHEMY

IT requires some effort of the imagination to picture the young Goethe retiring to the attic of his father's staid middle-class house, with its engravings of classical Rome and its solid respectable furniture, to occupy himself with fantastic furnaces and retorts, mysterious salts and crystals, and recipes for acquiring the Elixir of Life. But such is the account which he himself gives in his autobiography. This apparently superstitious seclusion becomes the more surprising when one recalls that this was the epoch of Lavoisier and Priestley, the age of Enlightenment not only in the artistic world of Winckelmann and Lessing, but also in the scientific sphere. One might have supposed that Goethe's first steps in science would have been more in keeping with the times. The fact is however that alchemy, although fast dying out, was still able to command some attention even among serious men of science. In the previous century it was still in a flourishing condition, and the attack delivered by Robert Boyle in his *Sceptical Chymist*, published in 1661, had little effect until much later. Scientists, while making great strides in some fields by the use of empirical observation, could not wholly give up their belief in the value of traditional methods of scientific research. Newton himself was no exception: the surviving manuscripts or transcripts on alchemy written in his own hand amount to some 650,000 words, a remarkable testimony to the tenacity of the old faith. [1][1] As late as 1782 the Royal Society could still investigate a claim, made by one James Price, to have transmuted metals into gold, and five years later the Berlin Academy was led to make an enquiry into similar claims made by a Professor at Halle. Price committed suicide; the German escaped with his life, if not with his reputation, and in neither

[1] *Footnotes*. References to sources (indicated thus: [1]) will be found at the end of the book. Other notes are given at the foot of the page.

case was the evidence offered considered as in any way satisfactory. [2] There was, no doubt, by this time considerable scepticism on the part of the investigators; nevertheless, the mere fact that investigations were made suggests that the aspirations of alchemy were even then not ruled entirely out of court. But what was only a vestige of fantasy in the minds of scientists still dominated popular belief, particularly in some parts of Germany. At the time of Goethe's birth, in the not far-distant town of Mannheim, alchemy was all the rage. Many of the most respectable citizens had established alchemical laboratories, and so widespread was the enthusiasm that the city authorities felt themselves obliged to suppress it by law, on the grounds that the numerous ill-guarded fires and the waste of labour and materials were dangerous, and harmful to the economy of the State. [3] A good deal of this ill-inspired endeavour was probably prompted by the desire for easy money. But another factor of a different order was also at work. There was a religious aspect of alchemy which made it especially acceptable to certain members of the Pietist movement. Jacob Boehme, from whom Pietism derived much of its doctrine, had made considerable use of alchemical language in his writings, and one of his later and more fanatical followers, the Pietist Gottfrid Arnold, had quoted extensively from alchemical works in his voluminous *History of the Church and Heretics*. It is possible to say therefore that wherever in Germany Pietism was strong, as it was in Frankfurt, there was likely to be also some belief in the validity of alchemy. All this makes the attitude both of the eighteenth-century scientists and of Goethe easier to comprehend. By the end of the 'sixties alchemy was still a possibility, although a remote one; the transition from pre-Renaissance to modern science was not yet complete.

It was in this atmosphere of thought that Goethe began his studies on his return from Leipzig University in September 1768. Sick more in mind than in body, he spent the winter's convalescence reading alchemical authors in company with the Pietist Fräulein von Klettenberg. It was she who introduced him to the confused work of Georg von Welling, the *Opus Mago–Cabbalisticum et Theosophicum*, a book which he described as 'obscure and incomprehensible', but whose mystifying language

apparently spurred him to further reading. He went on to study such authors as Paracelsus, Basil Valentine, van Helmont, and Starkey, all of them alchemists of note, and found particular pleasure in the anonymously published *Aurea Catena Homeri.* [4] Goethe's retrospective tone in enumerating these works in his autobiography is jocular, half-apologetic for youthful folly, but at the time he was clearly enthusiastic about them, and as soon as he was sufficiently recovered from his illness began practical work on his own account. His faith in the possibilities of alchemy was strengthened by the 'Universal Medicine' administered by Dr Metz, a friend of Fräulein von Klettenberg, which appears to have hastened the cure. [5] He now directed his efforts towards acquiring the secret of this panacea for himself. For a long period he concentrated on the production of the so-called 'Liquor Silicum', a kind of transparent glass which melted on exposure to the air and assumed a clear liquid form. With this he hoped to acquire a substance known as Virgin Earth, which would give birth to other substances from its own womb; to imitate as it were the creation of the universe by producing a microcosmic world of his own which would develop of its own accord. But although in old age he was still struck by the beauty of the experiment, he was disappointed in his efforts. All he was able to produce was a fine powder in which he was quite unable to perceive any magical properties, and the project had to be abandoned. [6] Another experiment described in the autobiography presumably met with equally little success. This aimed at the fabrication of a 'Luftsalz', an Airy Salt, which, like the Liquor Silicum, was to melt away on contact with the air, and, combining itself in a mysterious manner with 'the superterrestrial things', to produce a substance of similar miraculous potency. [7] Here again Goethe learnt little more than a modicum of practical chemistry, but his efforts did not flag, and he seems to have continued his attempts throughout the year 1769. In the following year, at the University of Strasbourg, he was certainly still concerned with the problems of alchemy, although there is no evidence that he engaged in any practical work there. Faust's opening monologue on the inadequacy of book-learning, and his resolve to give himself over to magic, is indeed a description of Goethe's own state of mind at this period. In a letter to

E. T. Langer, the mentor of his final months at Leipzig, he wrote on 11 May 1770: [8]

> I am trying surreptitiously to acquire some small literary knowledge of *the* great books, which the learned mob half marvels at, half ridicules, because it does not understand them; but whose secrets the wise man of sensitive feeling delights to fathom. Dear Langer, it is truly a joy when one is young and has perceived the insufficiency of the greater part of learning, to come across such a treasure. Oh, it is a long chain indeed from the Table of Hermes[1] to Wieland's *Musarion*.[2]

This enthusiastic outburst is far removed from the half-quizzical description given in *Dichtung und Wahrheit*. It reveals a Goethe who at this time saw in alchemy a way of cutting through the pedantries of the Universities, a direct approach to the very heart of things:

> Drum hab ich mich der Magie ergeben, . . .
> Dass ich erkenne, was die Welt
> Im Innersten zusammenhält,
> Schau alle Wirkenskraft und Samen
> Und tu nicht mehr in Worten kramen.

Faust was no merely historical figure, to be recreated like Götz from books, but a living projection of Goethe's own personality, the personality of an eighteenth-century magician. Goethe himself in these early years had given himself up to magic.

The reading of alchemical authors proceeded throughout that summer. On 26 August 1770, Goethe told Fräulein von Klettenberg that 'chemistry', by which he can only have meant the chemistry he had practised with her, was still his 'secret love'. The notebook which he kept at Frankfurt and Strasbourg [9] shows numerous entries referring to such authors as Paracelsus and Agrippa ab Nettesheym, and revealing an extension of Goethe's interest in the occult to include such topics as cheiromancy, astrology, and numerology. Just how far he went in

[1] *The Emerald Table of Hermes Trismegistus*, a collection of sayings attributed to the legendary father of alchemy. An English version is given in Read, *Prelude to Chemistry*.

[2] Wieland's *Musarion* contains one reference to alchemy (Book 2, line 308), but the subject is frequently referred to in his minor writings, and he wrote a story called *Der Stein der Weisen*. His attitude is somewhat deprecatory but not wholly unsympathetic.

these fields it is impossible to estimate: it appears from his own account that from the winter of 1768 until his meeting with Herder in the autumn of 1770 he had read little else but alchemy. 'My mystico-religious chemical pursuits', he writes, 'had led me into shadowy regions, and I was ignorant for the most part of what had been going on in the literary world at large for some years past.' [10] Only through Herder did he become acquainted with the new currents of thought springing up around him. This somewhat surprising admission suggests that Goethe's knowledge of alchemical literature must have been very wide indeed. It means, moreover, that during these two years, years when his religious and philosophical beliefs were acquiring their first foundations, Goethe was devoting himself not to neo-Platonism nor to any other of the recognized forms of philosophy, but to Hermetism. The degree to which alchemy had established control over Goethe's interests in early manhood can scarcely be over-emphasized.

Unfortunately there is little evidence remaining which would indicate the precise works he studied. The bibliographical works he is known to have used, such as Daniel Morhof's *Polyhistor*, [11] Schelhorn's *Amoenitates litterariores*, [12] and the *Bibliographia antiquaria* of J. A. Fabricius, [13] all provide chapters on occult authors, and would have offered him an almost unlimited range of choice. He may well have come across the collection of alchemical classics published in six volumes by Lazarus Zetzner at Strasbourg from 1613-22 under the title *Theatrum Chemicum*, in which he could have read most of the writers of any importance. The same can be said of Roth-Scholtz's *Deutsches Theatrum Chemicum* (Nürnberg, 1732), which he borrowed in 1808 [14] and may have known earlier. A source which he certainly used was Gottfrid Arnold's *Unpartheyische Kirchen und Ketzerhistorie*. [15] This work attempted to show that many so-called heretics, including some alchemists, were in fact witnesses of the true light, and contained several long extracts from such authors as Heinrich Khunrath, van Helmont, and Paracelsus. To these may be added some unspecified works of Basil Valentine and the English alchemist Starkey (Eirenaeus Philalethes), whom, as has been seen, Goethe studied at Frankfurt. Agrippa ab Nettesheym must be excluded since he dealt more in magic

than in alchemy proper. So too, and for the same reason, must Nostradamus, whose book is used by Faust to conjure up the Earth-Spirit. As far as precise titles are concerned, we are in fact restricted to the *Opus Mago-Cabbalisticum* and the *Aurea Catena Homeri*, together with a few chapters of Paracelsus mentioned by name in the Strasbourg notebook.[1] It must be recalled however that the alchemists were not a set of philosophers each with his own system. All felt themselves part of a tradition, and while each might expound the common doctrine in an individual way there was general agreement as to the fundamental tenets. In all his wide reading Goethe can have found only an elaboration of the basic doctrines.

It is in fact possible to reconstruct even from this scanty evidence a credible picture of alchemy as it appeared to the young Goethe. While it will be necessary in the following pages to quote occasionally from other authors, not known to have been read by him, the principal features of the alchemist's beliefs can be illustrated almost entirely from these few works. A characterization of the *Aurea Catena Homeri* will pave the way. This book, believed to have been written by a Joseph Kirchweger,[2] and published in 1723, represents a naive and crude attempt at demonstrating the truth of some of the alchemical doctrines by reference to easily observable chemical and physical phenomena. Its sub-title indicates concisely its intention: it is 'a description of the origin of Nature and natural things, how and whence they are born and created, also how they are destroyed in their primal essence, and what that thing is which gives birth to and destroys all things, the whole most simply demonstrated according to the order of Nature itself, and illustrated throughout with the best reasons and causes'. [16]

The *Aurea Catena* is based on the supposition that man and the universe both act in accordance with similar laws: 'as Nature works in particular things, so also does she work in universal things'. [17] The microcosm and the macrocosm are replicas

[1] These are: 'Paragrani Erster Trackat von der Philosophey', 'Anderer Tracktat von der Astronomey', 'Labyrintho Med. cap. 5', 'Tr. 4. de Pestil', 'De Podagr. lib. II. C. Geomantia', 'D. B. von den Tart. Krankh. 20. Cap'. The last four of these are almost exclusively medical.

[2] On the question of authorship see J. Ferguson, *Bibliotheca Chemica*, vol. I, p. 470.

one of another, or better, both are animated by the same Spirit. This sympathy between subject and object, man and Nature, the part and the whole, belief in which lies at the basis of all magic, is expressed in its most downright form in the verses of the *Aureum Vellus*: [18]

> Studier nun darauss du bist
> So wirst du sehen was da ist.
> Was du studierst lehrnest und ist
> Das ist eben darauss du bist.
> *Alles was ausser unser ist*
> *Ist auch in uns.* Amen.

Man himself according to this view is the universe in miniature, and so indeed is any part of the whole, since the whole is immanent in every part and yet transcends the sum of all. Goethe himself expressed a similar point of view, although with greater refinement, when he wrote to Schlosser:[1]

> In Nature there is everything that is in the subject,
> And something more.
> In the subject there is everything that is in Nature,
> And something more.

The same idea will be encountered in his botanical and optical studies. It is not of course an exclusively alchemical belief; parallels might well be drawn from Neo-Platonism and similar systems. We are concerned here however with the use made of it in the *Aurea Catena*. All the experiments described in the book derive from it in some way, one of the simplest and most naive being that which professes to show how the heavens and earth rose out of chaos. This is demonstrated by collecting a quantity of ordinary rainwater in a tumbler and allowing it to stand untouched for several weeks. At the end of this time a sediment will have formed at the bottom of the glass: the 'gross' matter will have separated from the 'subtle', and the experimenter will see with his own eyes the gathering together of the dry land. If the contents of the glass are now heated, cloud-like

[1] See Weinhandl, *Die Metaphysik Goethes*, 2. Buch, 3. Kap., where the meaning of this passage is discussed.

> In der Natur ist alles, was im Subject ist
> Und etwas drüber.
> Im Subjekt ist alles, was in der Natur ist
> Und etwas drüber.

vapours arise on the surface of the water and the 'heavens' appear. The vapour must then be collected again and distilled, until only a sediment remains; this sediment is Virgin Earth, the substance which Goethe attempted to produce at Frankfurt. From it comes all future development: the 'seeds' or embryonic forms of minerals are said to be found as gritty particles in the sediment; vegetables are represented by any plant-like forms perceived in it, and animals too are present in the shape of maggots. (It must be assumed that the process of distillation was not rigorously observed and that a good deal of extraneous matter found its way into the water.) In this way the miniature world was inseminated and peopled entirely out of its own substance; it was an inexplicable growth organically proceeding from the original Fiat. [19] It is unusual to find so clear an example of the intention of the alchemists as this. The fine disregard for logic and empirical observation is as a rule concealed behind a mystifying jargon which frequently makes it impossible to discover at all how the experiments were meant to be carried out. But this example at least illustrates one facet of the alchemists' work: the demonstration of a parallelism between the processes of development in the microcosm and the macrocosm, between the particular and the universal working of Nature.

Since the remainder of the proofs adduced in the *Aurea Catena* are of a similar character there is no point in reciting them at length. It is simpler to describe now merely the principal beliefs which the author attempts to justify. First among these is his insistence on the contrast of opposites throughout Nature. He ascribes to these opposites, which represent in general the active and passive tendencies in the world, the alchemical names of Sulphur and Salt. The list of qualities which he attaches to these categories is worth giving almost in full. It reads: [20]

Sulphur	*Salt*
Acid	Alkali
Spirit	Body
Father	Mother
Male seed	Female seed
Universal active principle	Universal passive principle
Heaven and Air	Water and Earth
Steel	Magnet
Hammer	Anvil

In another passage Kirchweger lists the qualities again, with some additions: [21]

Heaven	Water
Air	Earth
Father	Mother
Active	Passive
Subtle	Coarse
Clear	Dark
Volatile	Fixed

This is clearly a version of the polar opposites which appear in many religions and mythologies as the male and the female, Light and Darkness. Here again parallels might be drawn with Neo-Platonism, and, for example, Taoism. But it seems doubtful whether Kirchweger had any awareness of the far-reaching significance of these opposites as religious symbols. If he had, he shows no sign of it. Nevertheless it is with some of these associations in mind that he writes throughout his book of the chemical substances Sulphur and Salt, and on one occasion he does go so far as to equate the first of these with Light. [22] In this he follows the example of all the alchemists. As Starkey wrote: 'there are two Natures, the one more active, which is the Mercury, the other more passive, which is Gold.' [23] The substances themselves, whether referred to as sulphur or salt, mercury or gold, are symbols of these active and passive tendencies, the *agens* and the *patiens universale.*

The practical experiments, although making use of these substances, are intended to represent something more. Kirchweger insists throughout that the conflict between these opposites is to be overcome. The disharmony between the hammer and the anvil, the male and the female, is to be resolved. Since the tendencies symbolized by these categories are capable of an infinite variety of applications, it might be possible to translate this as the overcoming of the differences existing between subject and object, between the boundless claims of the individual and the restricting influence of society, or between man and God. This would be however to read into the *Aurea Catena* more than it actually says. Such ideas were certainly held by some alchemists, but Kirchweger nowhere makes any explicit reference to them; and an idea cannot be said to exist until it is

formulated. Kirchweger's interest is solely in Nature, and he expresses his borrowed philosophy only in the most general terms. For him it is enough to say that the active tendency 'desires' to become passive, and the passive to become active. When it comes to demonstrating the point, his language at once become extremely mysterious. Here is a typical example: [24] 'Now we will split up and separate . . . (the water) into its parts, examine these *per artem Vulcani*, and anatomize, dissolve, break up and separate the result into its *partes volatiles, medias et fixas*, then again conjugate, coagulate, and fix these parts that all may see how the most volatile can become fixed, and the fixed volatile, Heaven become Earth, the volatile become acid and alkali, and vice versa, so that a *Harmonia concentrata, Quinta Essentia*, or *Magisterium Universi* may emerge.' It is impossible to describe this as an instruction for the performance of an experiment, although doubtless some meaning is to be attached to such expressions as 'separate', 'coagulate', and 'conjugate'. What does appear plainly however is the idea that, in some unexplained way, Heaven and Earth, 'acid' and 'alkali', the 'fixed' and the 'fluid', in short the opposed tendencies in general, are to be brought into harmony with one another. The final aim is an *unverwessliche Beständigkeit*, [25] an incorruptible permanence which embraces within itself all opposites.

The method by which such an end is to be achieved is shrouded by Kirchweger in obscurity. For the most part he is content to show that the opposites exist throughout the world of Nature. The cyclical descent and reascent of water in the form of rain and mist is compared to the intercourse of heavenly spirits with the earth. [26] There is a continuous wheel of change, a way up and a way down, an eternal process of creation and destruction, and only the Whole can be said to live by virtue of these opposites, unaffected by their conflict, as a man lives by virtue of his rhythmical pulsation and inhalation. So, at least, Kirchweger's symbolical language might be interpreted.

Kirchweger appears to believe that man himself can achieve such a state of harmony, and takes over from the alchemists some of the terms by which they sought to express this belief. Chief of these is what he calls the principle of Putrefaction. It was for long believed that in order for growth to take place in

an organism, that organism must first die. An apple, or any other fruit, had to putrefy before the seed it contained could take root and produce more apples. Similarly dung, which was considered to be matter in a state of putrefaction and hence close to death, was renowned for its life-giving properties when applied as soil-dressing. Kirchweger brings forward numerous similar examples, all tending to show the same thing: that all Nature passes into new life by first dying away. But what has this to do with the achievement of harmony between the conflicting opposites? Kirchweger gives no hint, but the answer can be supplied from the works of the alchemists proper. The expression 'Putrefaction' is meant to apply not only to the material but also to the spiritual world. It implies that man must 'die' in the sense that he must abandon worldly goods, detach himself from his personal desires, in order to be 'reborn' in the harmony of the Kingdom of Heaven. This symbolism of death and rebirth plays an important part in all alchemical writings, and Kirchweger has adopted it for his own purposes in describing the world of Nature. He must mean, although he does not say, that just as spiritual death is necessary for man's spiritual rebirth, so material death is necessary for the material rebirth of natural things. Nature itself could by this means be harmonized with itself, as Kirchweger writes: 'Now mark well this example, for all Animalia, Vegetabilia and Mineralia are governed by this rule, that they are first putrefied, then separated, rectified and again coagulated and fixed, and regenerated in a glorious pellucid Body.' [27]

The same idea is expressed in a different way when it is maintained that this rebirth is always preceded by a return to the source of life. 'That from which a thing is naturally made', writes Kirchweger, 'through that same thing it must return again and be dissolved and broken up into its own nature.' [28] Or again: 'everything must be resolved and reduced into that from which it sprang.' [29] Thus a plant which springs from the soil must return to the soil, be decomposed, and join in the cycle of growth and destruction. In enunciating this principle Kirchweger is harking back to an idea as old as alchemy itself: that regeneration depends on a 'reduction to the first matter'. Metals, it was believed, could only be transmuted into gold by

first reducing them to a formless, indeterminate mass, that is, by melting them down. In this state, representing the primeval chaos, they were capable of being determined to any form the alchemist might choose, provided that the correct methods were known to him. In so far as they lost their individual characteristics in the process, they could in a certain sense be said to have died. Kirchweger comes close to this conception when he writes: [30] 'For this is certain, that all Nature was in the beginning water, and through water all things were born, and again through water . . . all things must be destroyed.' This can be read either as an apocalyptic prophecy of a second Deluge, or as an assertion that all things must die by returning to the primal matter, an undifferentiated mass of liquid, (as molten metal assumes a liquid form), in order to be regenerated. Or again the author, who appears to have been a Christian, may have had some such Biblical text in mind as *John.* 3. v.: 'Except a man be born of water and of the Spirit, he cannot enter into the Kingdom of God.' But he is, as always, not anxious to go beyond the natural analogy, and restricts himself entirely to physical and chemical examples.

Another alchemical expression used by Kirchweger to convey the same notion is the term 'rotation', or 'circulation'. After one of his examples he writes: [31] 'From this the adept may observe again, and should mark well the point, that by circulation . . . all dissolved things return to the primal matter or chaotic ▽ [i.e. water].' Circulation is thus equivalent to the return to the primal matter. It is a term very commonly used by alchemists and is closely connected with the ancient religious symbol of the serpent which curls round in a circle and devours its own tail. A variant of this symbol occurs in fact on the frontispiece of the *Aurea Catena*, where two dragons or serpents are shown arranged in a circle, each with the tail of the other in its mouth. Unfortunately no explanation of this image is offered in the book, indeed it is never referred to, but it is justifiable to assume some relationship between it and the symbol of circulation. In some way the return to the primal matter, with its implied renunciation of individuality, is connected with the rotation and self-devouring of the serpent.

In this brief outline of the *Aurea Catena* most of the funda-

mental ideas of alchemical literature have been touched upon. There is firstly the congruence of microcosm and macrocosm, secondly a view of the universe which divides all things into two conflicting and opposite categories. The intention of the book is to show how this conflict can be harmoniously resolved: firstly by death and rebirth, secondly by a return to the primal matter, and thirdly by a rotatory movement in which the subject of regeneration consumes itself. It is now possible to turn from Kirchweger and observe how these same ideas are developed and used by the alchemists proper in their search for the Philosophers' Stone.

It is already obvious that Kirchweger was not an alchemist in the strict sense of the word. Here are no instructions for the preparation of gold, the transmutation of metals, and the production of an Elixir of Life. But by the time the *Aurea Catena* was published these long-lived projects of the alchemists were on the wane: the advance of scientific methods had rendered the more symbolical aspects of alchemy suspect, and many authors, like Kirchweger, were content to demonstrate merely that the general beliefs of the alchemists could still be justified. Kirchweger, although almost always obscure, responds to the increasingly scientific spirit of his age by affording far more explicit demonstrations of his theories than had ever appeared before.

The true aim of alchemy, the quest of the Philosophers' Stone, had a more far-reaching significance than the *Aurea Catena* might lead one to suppose. As is well known, the essential function of the Stone was to transmute base metals into gold, and while this was by no means its only characteristic, it is as well to begin by asking how such transmutation was considered to be possible. The whole chemical process rested on the assumption that all metals were endowed by Nature with a common quality. By virtue of this quality each bore within itself a tendency to develop into the highest form of all metals, gold. This tendency, sometimes called the 'seed of gold', was however obstructed by natural imperfections, with the result that a variety of metals, conventionally recognized as seven in number, had come into existence. These were arranged, according to the degree of perfection, in the order lead, tin, iron, copper, quicksilver, silver and gold, although authors sometimes differed on

the question of precedence among the baser metals. It was the task of the alchemist to assist the more imperfect metals to attain their highest possible form by removing as far as possible the obstructions in their path.

Imperfection resulted not only from the fact that the metals were base, but also from their natural opposition. Mercury, as has been seen, was regarded by Starkey as representing an active tendency, while gold was more passive.[1] Iron and copper were also opposed in this way. [32] But there was no systematic classification: sometimes mercury was said to be opposed not to gold but to lead, while the opposite of gold was silver. [33] Indeed it is not possible to pin down even the equation of mercury and gold with the active and passive tendencies, for as Starkey goes on to remark 'the activity of the Mercury above the Gold is because the moving virtue of Sol is sealed, that is, his Sulphur is imprisoned. Otherwise, when Dissolution is made, Sol [i.e. gold] then is most active, and Mercury more passive.' [34] The essential point was that the metals, by reason of their very individuality, were opposed one to another; it did not greatly matter which was active and which passive.

In order to remove this imperfection the process known as the *Magnum Opus* was undertaken. It was necessary first to reduce the metals concerned to a formless mass, and there were broadly speaking two methods of doing so. One of these was to melt the ingredients down to a fluid state. The other was to place them in a bath of mercury, which has the property of dissolving most other metals, and was consequently often referred to as the Universal Solvent. To quote Starkey again: 'the main ground for the possibility of transmutation is the possibility of reduction of all Metalls, and such Minerals as are of metallick principles, into their first Mercurial matter.' [35] In each case the effect was the same, and this indeterminate, fluid state once achieved, it was possible to induce in the metal the form desired. Thus far most alchemists agree as to their method: there is almost always a furnace or some other vessel in which the metals are dissolved. But beyond this point the widest possible variety of instructions appear. Some advise a constant process of distillation and re-distillation; others consider it necessary to collect

[1] See p. 11 above.

the crystals which form on the side of the vessel; others again demand two separate operations to withdraw the 'seeds' of silver and gold, which are afterwards to be joined together in a final stage. Numerous esoteric symbols are also introduced: there are birds of all kinds, crows, swans, doves, phoenixes, eagles, each with its own significance, together with Kings and Queens, homunculi, cherubs, water-nymphs, salamanders and basilisks. To attempt any classification of these is beyond my present purpose. One common belief does emerge however from the welter of symbols. There is generally present the idea that once the imperfections have been removed the seed of the metal will develop in a 'natural' way, comparable to the processes of gestation in living organisms. Thus the adept is often instructed to keep the flame burning beneath his vessel for a period of forty weeks: a clear parallel to the period of pregnancy in the human body, which is not obscured unduly by the references to forty 'philosophical months' or years. There is in fact a sexual element in all alchemical writings. As in the *Aurea Catena*, the active and passive tendencies are equated as a matter of course with male and female, and the idea of a metallic seed lent itself readily to sexual metaphors. The development of the imperfect metals towards gold was therefore spoken of as an organic process, and frequently compared with the growth of plants. The alchemist could do little to assist it except to ensure that his furnace, with its life-giving heat, was not allowed to go out.

It was however possible to gain some idea of how far the work had progressed. The increasing perfection of the metals, or the development of the metallic seed, was said to be characterized by a change in colour. The first stage to be observed was the 'nigredo': the contents of the vessel turned black. This was probably noticed in particular in the case of lead. It was succeeded by the appearance of the colour white, 'albedo', which is less easy to explain as an observable phenomenon. The third stage was a yellow hue, 'citrinitas', which was followed in its turn by the highest colour, red, the 'rubedo'. This final stage was also referred to indiscriminately as purple. When it was reached the alchemist might be assured that the end of his quest was reached: 'Thou shalt have a sparkling red, like unto the flaming fire' wrote Starkey. 'Then art thou come indeed to thy

Harvest, and to the end of all thy Operations.' [36] But here again there is no general agreement as to precedence. Sometimes the yellow hue was omitted altogether. [37] Sometimes, but much more rarely, it was said to signalize itself the final stage, probably owing to its affinity with the colour of gold. [38] A stage known as 'the peacock's tail', in which all possible colours were represented, was also occasionally inserted between the white and the red. Yet again the end of the work was said to be a transparent whiteness, a 'glorious pellucid Body', in the words of the *Aurea Catena*, and, to add yet further confusion, it was called both red and white at once. On the whole however the consensus of opinion seems to have been in favour of black as the initial stage and red as marking the conclusion of the operation. When this colour was observed, the metals had not only been transformed into gold, but the Philosophers' Stone had been created.

With the Stone in his possession the alchemist was able to turn it to account. It possessed a highly concentrated force, which gave it its other names of quintessence and tincture, and by virtue of which it was able to impart its own quality to the baser metals. The process by which this was carried out was known as 'projection': the Stone was projected again into the furnace from which it was taken, and worked through the new mass of molten metal like a ferment, transforming it all into gold. When used in powder form a single grain of the Stone was able to transmute a large mass. Estimates varied as to the exact relationship between quantity and efficiency, some being content with a ratio of one to ten, others with one to a thousand, and yet others, like 'Raymund Lully', declared that one grain would transmute a whole ocean. But once again the divergent views are not important. It is reasonably certain that no alchemist ever discovered any real stone or powder capable of transmuting metals into gold, and the figures are doubtless merely tributes to the wonder-working power of the preparation. What is of interest however is this quintessential nature of the Stone and its ability to impart its own characteristics to other minerals. As A. J. Hopkins has pointed out, there is a good deal of resemblance between the Stone, seen from this viewpoint, and the Aristotelian entelechy, since both are capable of reproducing

themselves. [39] This resemblance is emphasized by the fact that the Stone is often said to be identical with the primal matter from which it is supposed to spring. It is its own metallic seed and the seminal product of that seed. In this sense the *Magnum Opus* was said to be cyclical, and was often compared with the acorn which gives rise to an oak, whose ultimate end is to produce yet further acorns, and more oaks. The Stone was thus both the beginning and the end of the operation, the first and the final cause. This double nature of the Stone afforded the alchemist endless possibilities for deluding the uninitiated reader. He could declare that it was useless to attempt the production of the Stone until the original Matter had been found, and that this in turn could not be discovered until the Stone had been made. The whole system was a closed circle into which the reader could penetrate only by an intuitive sense of what was intended.

The point which the reader was expected to guess was that the manufacture of gold was not always the most essential part of the operation. In the earlier alchemical writings this was probably never mentioned. By the eighteenth century however authors were becoming far more explicit. Georg von Welling states openly in the preface to his *Opus Mago-Cabbalisticum*, [40] 'that our intention is not directed towards teaching any one how to make gold, but something much higher, namely how Nature may be seen and recognised as coming from God, and God in Nature'. Shortly afterwards he again insists that he has no desire to increase the lust for gold: [41] 'nay, but we wish with all our hearts that all men might seek and find not gold, but God.' Gold was his aim only in so far as it was the 'highest' metal and the symbol of the Sun. His true intention was to instruct the reader in the knowledge of God, and for him, as for many of his contemporaries, to acquire the Stone was to attain such knowledge in full. For the Christian alchemist indeed the Stone was identified with Christ, although the fact was rarely stated. Basil Valentine speaks in guarded terms of 'the head-stone in the corner'; [42] Robert Fludd, more openly, writes of 'ille Lapis Angularis Jesus Christus'. [43] Heinrich Khunrath, a follower of Jacob Boehme, is perhaps the most explicit. [44] 'Since God the Lord', he writes, 'for our edification permits

Jesus Christ to be represented in the great Book of Nature by the Stone of the Philosophers, I may fitly quote the words of Isaiah the Prophet of Christ, in order thereby to show to some extent the wonderful harmony and correspondence of these two stones. . . .' This symbolism could have been known to Goethe either through Georg von Welling or through Gottfrid Arnold. The former makes a similar comparison between Christ and what he calls 'the fixed Salt', which is yet another synonym for the Stone: '. . . fallen Man, having come through sin and ruin into a state of putrefaction, must be regenerated, and maintained in a fixed and permanent condition, through the sweet, fixed Salt of eternal and gentle peace, Christ Jesus.' [45] Arnold speaks of Christ as 'the heavenly lovingness of the ruby or carbuncle-stone', [46] again hinting through the red colour of the gems at the perfection of the Stone.[1] The symbolical sense of 'putrefaction' now grows apparent. It is on the one hand synonymous with the sinful and death-like state of man, brought about by the fall of Adam, while on the other hand it declares that man is to be redeemed from this state by Christ. Man must pass through the state of sin, in fact he must be capable of death, in order to be reborn in Christ. To acquire the Philosophers' Stone through 'putrefaction' was thus to undergo this death and rebirth.

It would be incorrect however to limit the scope of alchemy to a purely Christian application. As has been seen, the Philosophers' Stone was equivalent in some respects to the first and final cause; it was the Alpha and Omega. Basil Valentine declared that 'its true name, according to temporal understanding, is called ALL IN ALL'. [47] It was indeed a commonplace of alchemy that the matter of the Stone was to be found everywhere, on mountain-tops and in the depths of the ocean, in the air and in the fire of the alchemical furnaces. In brief, the Stone was the entire Universe, the One and All. It was God immanent in all creation and yet embracing and transcending it. For the Christian alchemist it was of course possible to speak of Christ in this way. But it does not follow that every alchemist was a Christian, since it was possible to conceive of God in these terms without

[1] For further examples of Christ-symbolism in alchemy, cp. C. G. Jung, *Die Erlösungsvorstellungen in der Alchemie*, pp. 84-104.

necessarily accepting the authority of the Christian doctrines. An ancient Chinese alchemical text has recently been published, in which the divinity of the Stone is associated rather with the Tao. [48] It is as well to recall therefore that the Western alchemists studied in the following pages, although referring to the Stone as Christ, always thought of him also as the immanent and transcendent Whole. This was the essential characteristic; other connotations were perhaps dependent upon time and place.

The meaning of the alchemical quest can now be defined a little more closely. To acquire the Philosophers' Stone was, as has been seen, to achieve full knowledge of God. This must now be interpreted as gaining knowledge of the whole universe, an apparently impossible task. It is however precisely the claim of those who have experienced mystic union. 'Whatever terms he may use to describe it', Miss Underhill writes in her authoritative work, 'and however faint or confused his perceptions may be, the mystic's experience in Contemplation is the experience of the All.' [49] The alchemists, naturally enough, were almost completely silent on this aspect of their work. It is questionable indeed whether many of them were aware at all of this implication. One of their number however, Oswald Croll, a follower of Paracelsus, spoke of it at some length, and his words, in view of their rarity, are worth quoting extensively. [50]

> The alchemists [he says] 'leave themselves, and totally go out from themselves. . . . They hasten from the imperfect to that which is one and perfect, the knowledge and contemplation whereof . . . is a sacred, Heavenly and hid silence, the quiet or Rest of the sences and all things, . . . when at length . . . all minds . . . shall be altogether but one thing, in one MIND which is above every MIND. It is the intimate vision of God, which also hapneth by the Light of Grace to the separate Soul even in this world, if any man set himselfe about it now, and be subject to God. Thus many holy men by vertue of the Deifick Spirit have tasted the First fruits of the Resurrection in this life, and have had a foretaste of the Celestiall Country.'

This is unquestionably a description of the *unio mystica*, and shows that in some cases at least the Philosophers' Stone represented full union with God. A similar meaning can perhaps be attached to the vision described in the *Chymical Wedding of Christian Rosencreutz*, in which the hero recounts how he

received wounds in his feet.[1] This might well refer to the stigmata often associated with such revelations. The *Golden Age Restored* of Heinrich Madanathas also deserves mention since it attempts to interpret the Song of Solomon as a love-song to the mystic Bridegroom, and to show its relationship to the alchemical work. [51] It is moreover reasonably certain that Goethe was made aware of this significance of the *Magnum Opus* by his guide into the mysteries of alchemy, Fräulein von Klettenberg. This pious woman found her life profoundly changed, some eleven years before her meeting with the poet, by what she believed to be a visitation from her Saviour. The vision is described in some detail in the sixth book of *Wilhelm Meisters Lehrjahre*, and Hermann Dechent has shown that this description tallies with her own experience, in which she claimed to have seen the body of Christ with her own eyes, to have kissed its wounds, and to have felt many of the characteristic sensations of mystical union. [52] In later years she urgently desired to make this experience attainable by others, in particular by Lavater, and her letters to him are full of exhortations to await the coming of such a supreme moment of ecstasy. In one such passage, she refers to her vision in terms of alchemy, using the Paracelsian expression 'potable gold', another of the many synonyms for the Philosophers' Stone. 'I have received', she writes, 'an *aurum potabile*, enjoyed an imperishable drop, which transforms everything, which fashions me,—as my Head is fashioned at the right hand of Majesty.' [53] The Stone, that 'imperishable permanence' which was to transform metals and bring them closer to the perfection of gold, is here spoken of as refashioning a human being, bringing her closer to the form of her 'Head', that is of Christ, at the right hand of God. 'The earthly parts', in the words of Basil Valentine, 'have been consumed body and soul by the Divine, and the earthly body has entered a heavenly being.' [54] It seems very probable that Fräulein von Klettenberg would have divulged to Goethe this aspect of the Stone's symbolism, just as she confided to him also the nature of her vision. Whether he made any use of the knowledge is however another matter.

[1] J. V. Andreae, *op. cit.* p. 17. Goethe read this book in 1786. See his letter to Frau von Stein, 28 June 1786.

Once again a word of caution is necessary. The ambiguity of the alchemical writings makes it impossible to determine how often the purely mystical symbolism was present in the minds of their authors. It is also difficult to decide whether it was associated with the process of making gold from the beginning of alchemy, or whether it was introduced at a later date. A. J. Hopkins considers that alchemy began in ancient Egypt simply as a method of gilding metals, in order to give them a more pleasing outward appearance, and that other implications were a later development. [55] A. E. Waite postpones the connection of mystical symbolism with the work until after the Renaissance. [56] This is however certainly an exaggeration, and Father Festugière has since shown with considerable probability that the mystical associations were fairly early, although post-Christian. He considers that alchemy was purely practical until the second century B.C., acquired a philosophical aspect between that time and the second or third century A.D., and was intended to represent mystical doctrines from the third or fourth century onwards. [57] There is thus no question at all that the authors studied by Goethe, all of whom wrote later than Paracelsus or Boehme, were capable of regarding the *Magnum Opus* as a key to the mystic way. The question of the origins of alchemy can therefore be disregarded here.

I do not mean to suggest however that the practical side of alchemy was considered unimportant. On the contrary, it was part and parcel of the doctrines, and many passages can only be read with reference to real metals. But the manufacture of gold came in time to play a subordinate role, whereas the symbolical aspect increased in importance. The laboratory work assumed something of the function of a liturgy; like the Eucharist it became the outward sign of an inward act, and by means of it the alchemist could visualize and better understand the processes of his inward development. All the arguments for or against the need for practical experiment could in fact be drawn from the controversy over the Real Presence. If the alchemist's inward state of mind corresponded with the work of his hands, the creation of the Philosophers' Stone would accompany the fullest possible knowledge of God. In order to see how this was considered to be possible, it is necessary now to examine

the practical steps of the work and their association with the mystic way.

The purifying and refining fire is of course a common religious symbol, occurring frequently in the Bible. There is indeed a passage in the *Book of Isaiah* which, with its reference to base metal, bears a strong resemblance to alchemical language, although no one would suggest that anything more than a poetic metaphor is intended. Speaking through his prophet, Jehovah declares: 'I will turn my hand upon thee, and purely purge away thy dross, and take away all thy tin.' [58] The alchemists of the later period were fond of such quotations, whatever their origin may have been. The mystic St Catherine of Genoa must surely have had them in mind when she wrote that 'souls are covered by a rust—that is, by sin—which is gradually consumed away by the fire of purgatory. The more it is consumed, the more they correspond to God, their true Sun.' [59] Georg von Welling clothed the same idea in alchemical language when he wrote that during the chemical process the 'stinking sulphur' was removed. In the same fashion, he continued, man's evilness was removed by Christ, [60] 'so that, after he has laid aside through temporal death his filthy, stinking, sulphurous shell, into which he has crept with his Satanic imagination, he may be through Christ presented again in his glorious pristine shape to God his Heavenly Father'. This, therefore, was the meaning of the purification, or, as it was sometimes called, the calcination of metals. Goethe himself certainly understood it in this way, as can be seen from one of his letters to E. T. Langer, dated 17 January 1769, that is, shortly after his alchemical studies began. Langer was, as has already been seen, to some extent Goethe's confidant in these occult matters, and there can be no doubt that the passage is to be understood alchemically. 'I have suffered', Goethe writes, 'and am free again, this calcination was very profitable for my soul.' [61] In using the word 'calcination' where it means a purgation and liberation through suffering, Goethe reveals his awareness of the human application of his alchemical language.

Concurrently with this meaning of purification, the fire of the alchemists also bore the sense of a constant burning love of God. So Starkey enjoined his reader not to think 'that this increase of

Fire consists in the blowing of the Coal, no verily, it is a more subtle internal fire that we have, and yet that also must be kept constant, and in due order'. [62] Similar injunctions are met frequently throughout these writings, and once again their meaning is clarified by comparison with purely mystical authors. Thus Jean de Bernières Louvigni, whom Goethe probably read at Strasbourg, [63] observes that 'the inward fire must be kept carefully covered and concealed. If one omits to lay on wood from time to time, that is, to maintain it by frequent lifting of the heart and continual looking upward to God . . . it is in danger of going out.' [64] The alchemical furnace had a two-fold character: like the fiery roses cast by the angels at Mephistopheles its flames could consume either with love or with terror.

The teaching of the alchemists did not however necessarily tend towards asceticism. The purgation of the base metals did not go so far as to deny them all right to exist. It was rather a question of removing all possible obstructions in the path of the developing seed of gold which each was supposed to contain. Translated into human terms, this meant that the passions and desires needed to be sublimated in order to attain harmony. The Freudian expression was in fact used by the alchemists, as Silberer has pointed out, in a similar sense. 'In the process of Sublimation', wrote Paracelsus, '. . . the spiritual is raised from the corporeal, subtilised, and the pure separated from the impure.' [65] That is, the so-called lower impulses were to be refined and brought to a higher level, just as, according to Freud, the anti-social, sexual libido can be sublimated into a socially useful urge. [66] It was not desirable therefore to destroy the baser elements entirely, since only from them could the Philosophers' Stone be made. These very inferior metals, this libido, were to be transmuted in the alchemical work into a God-like form. Just as God embraced within himself all opposites, the apparently good as well as the apparently evil, the active as well as the passive, so the metals could be brought into this condition; and Man himself, by accepting and utilizing what had generally been regarded as evil, the passions, and assimilating it to what had been regarded as good, the spirit, could achieve a similar harmony: he could become God-like. The complete destruction implied by thoroughgoing asceticism

would destroy at the same time the seed which the alchemist desired to cultivate.

The imperfections once removed, that is, the renunciation of purely personal desires once achieved, it was possible for the golden seed to grow. 'As we order it', wrote one adept, 'there is made a quickening of it, as a grain of Corn in the Earth is quickened.' [67] Here the reason for the alchemists' insistence on organic plant-like growth becomes apparent. The seed's development could not be hastened, it must take its own course. It was commonly spoken of also as a central point or spark, which was to grow until it filled the entire frame of the subject. Paracelsus called it 'a small spark of the eternal invisible fire'. [68] All natural objects were considered to possess this central point or seed, and all, including both metals and Man, were capable therefore of developing into the highest form. It was in fact itself the embryonic perfection latent everywhere, the primal matter of the perfect Stone. Thus Gottfrid Arnold writes: 'in general, the Centre is the innermost ground of every thing, for which reason there are various Centra. In man, the Centre is God Himself, or the faded image of God. . . .' [69] Similarly, Georg von Welling speaks of the eternal joy to be found in 'the centre of peace, that is, in God', [70] and of 'the tincture which is Christ Jesus himself, the beginning and the end, the centre of the revealed divine eternity'; [71] while Louvigni also speaks of Christ as the 'centre of peace'. [72] It might then be described as the latent seed of faith in Man, or the potential ground in which the full knowledge of God might be implanted. It is possible also, in view of its divine universality and its veiled nature—a faded image of God, as Arnold calls it—to make the comparison with Schopenhauer's Will. This too was immanent throughout the universe, wholly present in every part, concealed from knowledge by the veil of illusion, and only knowable by an act of renunciation. There are however other more closely connected parallels which it will be more profitable to pursue.

The aim of the alchemists might be described as the knowledge of the centre. 'Felix qui verum potuit cognoscere centrum', wrote an unknown author quoted by Arnold. [73] This fulfilment was described in two ways. On the one hand it was characterized by a radiation of spokes proceeding from the

centre of the subject outwards. Thomas Vaughan, twin-brother of the poet Henry Vaughan, has given most vivid expression to this symbol. 'To instruct thee then', he writes, [74] 'this mystery is perfected when the Light in a suddain, miraculous coruscation strikes from the Center to the Circumference, and the Divine Spirit hath so swallowed up the body that it is glorified like the Sun and Moon in their splendour.' In the *Chymical Wedding* of Christian Rosencreutz the same image is employed, but reversed, the rays on this occasion striking from the circumference inward. In the allegory representing stages in the preparation of the Stone, the hero is led into a room in the centre of which a golden globe is hung. On this globe the light of the sun is concentrated from all sides, so that 'in all quarters of the Room there was nothing but Suns, which by artificial Refractions beat upon the whole golden Globe hanging in the midst. . . .' [75] Other alchemists expressed the idea by showing a number of archers in a semi-circle, aiming at a central target, or a ring of soldiers attacking a King in their midst.[1] It is difficult to imagine any phenomenon observable in the practical experiments to which these images might have corresponded. It seems on the whole more likely that they were intended to represent some inward sensation, for which no other description could be found. As Welling wrote, 'when good people hear that they must seek God and his wisdom, they do not consider that they must seek and find such great goodness in themselves, in the innermost depths of their souls'. [76] The symbol of the wheel with its spokes radiating to the circumference appears to be associated with the symbol by which mystics often describe the feeling of an indwelling God. Louvigni speaks of God as a 'sun, with an infinite number of rays, which was situated in the most hidden corner of my heart, and which desired to be known and loved by my higher powers'. He advises the reader to 'hide himself in his centre, in God, who is in the depths of his soul'. [77] A similar feeling of bearing an inward sun is ascribed by Goethe to the mystic Makarie in the *Wanderjahre*, [78] and the list might be extended indefinitely.[2] But the other symbol

[1] For these and several similar illustrations see C. G. Jung, *Psychologie und Alchemie*.

[2] Further examples are given in C. G. Jung, *Psychology of the Unconscious*, English translation, pp. 101-2.

by which the alchemists characterised the attainment of the centre must now also be described. This was the gradual growth of the centre until it filled the whole frame. In an allegorical account of the work, one of the numerous questing heroes describes how he saw a vessel filled with water—no doubt a representation of the alchemical retort. 'In the midst of the Water', he writes, 'as it were in the very centre, there was a most radiant twinkling spark, which sent forth its Beams even to the very surface of the water.' Here the central spark is seen as a radiating point. Subsequently however it becomes a naked woman, 'very beautiful, even to the parallel of Helena'. At first, 'she appeared very small, and waxed bigger and bigger, until the Water appeared no more, but she herself had transmuted its whole Substance into her shape'. [79] The parallel with the *Magnum Opus* is here easier to discern. There also the seed of gold was said to develop until it prevailed over all surrounding substances, and transmuted them into its own form. It is however extremely unlikely that the alchemists ever observed such a development taking place in their laboratories. Of greater interest is the meaning attached to the idea; and once again it is useful to compare the alchemical symbol with the writings of mystics. In the practice of contemplation the mystic attempts to dissociate himself from his immediate surroundings and concentrate his powers on the God whom he believes to dwell within. Evelyn Underhill, describing this, speaks of a 'spark', which must be brought within the conscious field, 'out of the hiddenness, from those deep levels where it sustains and guides . . . normal existence', and be made 'the dominant element round which . . . personality is arranged'. [80] This involves, she continues, 'the emergence from deep levels of man's transcendental self; its capture of the field of consciousness; and the "conversion" or rearrangement of his (the mystic's) feeling, thought, and will—his character—about this *new centre of life*'.[1] The Cambridge mystic William Law speaks in similar terms:

> Though GOD is everywhere present, yet HE is only present to thee in the deepest and *most central part of thy soul*. The natural senses cannot possess God or unite thee to him. . . . But there is a root or branch of thee from whence all these faculties come forth, as

[1] *Op. cit.* p. 80. My italics.

lines from a centre, the fund or bottom of the soul. This depth is the unity of eternity—I had almost said the infinity of thy soul; for it is so infinite that nothing can satisfy it or give it rest but the infinity of God.[1]

There is a marked resemblance between this language and that of the alchemists. Whether or not the feeling so described was a revelation of God may be left to personal interpretation; there must be however some genuine feeling of fulfilment which urges the mystic to attempt its definition, and the parallels with the writings of the alchemists are so exact as to suggest that they too had experience of it. The seed of gold, which they connected both with Christ and with the Philosophers' Stone, the All in All, represented the incipient identification with the Divine. It could only be known by freeing it of the surrounding imperfections, that is by something resembling the practice of contemplation. Such knowledge once achieved, it was to grow until complete fullness was reached, until the indwelling God filled every nerve and finger, just as the seed of the Stone transmuted all about it into the highest possible perfection.

Centre and circumference were often spoken of by the alchemists as opposites. At the centre, as at the hub of a wheel, all was peace and stillness in movement. At the circumference, which might be thought of as the rim of a rotating disc, there was always motion and discord. This symbol of rotation was used by the alchemists as a contrast to the harmony of the Stone. It is easily imaginable that molten metal heated within a vessel might rotate, and Starkey describes the phenomenon as follows: 'Take then of thy clean Mercury, . . . and mix it with thy Body . . .; put it in a glass, . . . and govern it with a Fire, and thou shalt see thy elements circulate . . . the Male and Female are now beginning conjunction.' [81] That is, the rotatory movement of the elements about the centre is the prelude to the burgeoning of the seed, after which the 'male' and the 'female', the active and passive, the good and the evil, and all opposites whatsoever, are combined, and the Stone is made. God or Christ is beginning his incarnation in the adept, and this is the preliminary stage towards the full assimilation of each in each. But the rotatory movement itself is only a

[1] Quoted by Aldous Huxley in *The Perennial Philosophy*, p. 8. My italics.

preliminary: so long as it continues the desired identification with the centre is incomplete.

> God is the Centre of all Creatures [wrote Croll] by how much the more any draw near him, by so much the more blessed, and lesse variable, and mutable is he; But the farther any thing departeth from that Centre, or One, to wit, the immutable will of God, to the circumference, variety and plurality of the Creatures, the more unhappy, imperfect, and mutable is it: Blessednesse is in unity, not in the circumference, in Christ, not in the world, is Peace and Rest. [82]

The *Aurea Catena* uses similar language when it says that 'the nearer a subject lies to the centre, the more strongly it is fixed', [83] implying that it comes closer to the peace and 'fixity' of the Stone; while Welling affirms that 'everything which lies outside the point, is in constant unrest, and longs incessantly for its origin, that is, the point where it finds peace'. [84] The central seed thus represents the Divine also in the sense that it is a unity beyond the tribulation of the individual. Rotation is discontent and dissatisfaction, the centre is stillness and power. Outside the centre, wrote the physician and alchemist van Helmont,

> the soul can know no reall or permanent satisfaction, . . . but like the Aguish magnetised Needle, reels to and fro, in a Phrensie of inquietude, distracted twixt various Apparitions, until shee lye parallel unto the Center, or Unity thereof [of love]: and having once fixed in that happy position, she is, by an eternal union, identified or assimilated unto that twin of her self. [85]

Almost identical terms are used by Miss Underhill in her account of mysticism:

> This progressive surrender [of self] appears in the practice of orison as a progressive inward retreat from circumference to centre; to that ground of the soul, that substantial *somewhat* in man, deep buried for most of us beneath the great rubbish-heap of our surface interests, where human and divine life meet. [86]

This, therefore, was in part what the alchemists intended when they spoke of purifying the rotating metals within their vessel, and discovering the golden seed.

It is now possible to turn back to a rather obscure passage from the *Aurea Catena*, already quoted,[1] in which it was said

[1] See p. 14 above.

that all things must return by 'circulation' to the 'primal matter'. It is clear that this primal matter was God, regarded as the first cause. It was at once the molten mass of liquid metal and the undifferentiated universal chaos, the infinite ocean in which all individuality was to cease. Oswald Croll, always more explicit than most, confirms this when he speaks of those 'who from Divine Love willingly cast themselves into the fountaine of the Abysse and into the Sea of Nihilitude or Nothingnesse, and enter into the Holy of Holies by the Life of Christ, that in the Sabbath they may live with God in Rest and Blessednesse'. [87] This act of renunciation was essential to the rebirth into new life in which the alchemists believed. The self-destruction implicit in the rotating serpent was identical with the 'putrefaction', or death to self, spoken of elsewhere. Only when man's lust had completely consumed itself 'by revolution', said Welling, could he appear again in his former angelic splendour. [88] It was necessary to yield all personal desires and become one with the universe.

With the expression 'rebirth', however, yet another symbol is coupled, for the alchemists sometimes described this regeneration as an actual birth from a living mother. It was in this sense that they understood the phrase 'ex quo aliquid est, in illud rursus resolvitur': [89] man was made by his mother, and to his mother's womb he must return to be reborn. Paracelsus writes that 'he who would enter the Kingdom of God must first enter with his body into his mother, and there die', and again that the soul 'must enter its mother in God'. [90] The whole world, in his view, was subject to this law, and must go into its 'mother . . ., its "*primam materiam*", "*massam confusam*", and "*abyssum*" ' in order to achieve eternity. [91] This was, however, the macrocosmic aspect of the Stone, which, since it is possible to treat only one meaning at a time, must be left out of account here. Perhaps the crudest and most direct account of the return to the mother occurs in doggerel verse in the appendix to Welling's work. It is worth quoting at length since Goethe is almost certain to have read it. The male or active principle is here represented by the King, who is Gold, while the passive principle is represented by the Mother, or Mercury: [92]

And yet it seems to me, the door of the Promised Land still
stands open for me,
And that we must come remoulded from the mother's body.
For I cannot otherwise reach the Kingdom of Heaven
Unless I am born a second time.
Therefore my desire is to return to the mother's womb
That I may be regenerated, and this I will do right soon.

To this end the mother herself has urged this King,
And hastened to receive him with motherly love,
And this great miracle she truly did perform,
And received into herself, as a child, this King among seven.

There is little remaining trace here of any concern for practical experiment. But in so far as the passage bears a relationship to the transmutation of metals (and the 'I' of the piece is still spoken of as King of the seven metals) it symbolizes the reduction of the metal in question to its primal matter, now boldly referred to as the Mother. The metal has been placed in a bath of mercury in which it is to dissolve. In the same way Paracelsus speaks of placing 'the King' in a bath, until he has been washed clean and restored by his mother to a new and purified body. [93] There was however a further sense, in which the mercurial bath represented the Mother of God, and the miraculous birth of Christ in her.

Just as Mary received through the Holy Ghost, in a supernatural and invisible fashion, the Son of God, promised by the Father [continues Paracelsus] [94] so our pure Virgin the philosophic Mercury, in a miraculous way, has given birth again by the Holy Ghost, that is in this case by the Spirit of Mercury, to the high quintessence of all things.

The dissolution of one metal or mineral by another was thus compared with the incarnation of Christ in the Virgin Mary. In fact the bath of mercury was often referred to as the *Balneum Mariae*, and, although the name was usually ascribed to 'Mary the Prophetess', the supposed daughter or sister of Moses, who was said to have invented the instrument, there were, as Berthelot has remarked, frequent resemblances between the two Maries. [95] The Bath of Mary was thus a symbolical representation of the womb in which Christ was born. The same

incarnation was possible, the alchemists argued, in any natural thing, whether metal or man. The seed of faith and knowledge might be implanted in any 'pure body', and there develop, provided first that all feeling of individual separateness was abandoned. In the state of fusion in the formless chaos of the womb, the incarnation of Christ or the universal Divinity in the adept could begin.

The alchemists were however fond of paradoxes: for them death and birth were almost synonymous. Thus it is that the return to the primal matter was associated not only with the birth of Christ, but also with his death.

> As then it is with those who are Redeemed, [wrote Starkey] their Old man is crucified [and] after that the New man is restored . . . even so it is after a sort in our Operations, for first of all our old Body dyeth, . . . which is as it were the Purgatory of this old Body, . . . and when it once is purged, and made clean and pure, then are the Elements joyned, . . . so that from henceforth there is nothing but concord and amity to be found in all our habitations. [96]

To the numerous metaphors of death and regeneration: the return to the primal matter, to the womb, to the mother, to the centre, the process of putrefaction and rotation, is now added the death of Christ on the Cross. All these expressions were different forms of the same idea, that the individual must make an act of total renunciation in order to enter a new and better life. 'We must renounce', said Welling, 'not only the world and all its pleasures but also our selves with all that we have and possess.' [97] Only in this state of complete detachment could the divine seed take root.

The way in which this seed developed was, as has been seen, beyond the alchemist's control: he could only await its fruition. There were however numerous ways of describing the perfection of the Philosophers' Stone, and an examination of some of these will clarify further the alchemists' intentions. At the basis of all their operations was the concept of the two principles, active and passive, which were in constant conflict with one another. 'Two repellent Spirits may live one beside another', wrote Basil Valentine, 'but they do not get on well together.' [98] For some of the alchemists these opposites had the widest possible connotations. On the title page of Robert Fludd's *Philosophia*

Moysaica for example they are equated with 'Apollo' and 'Dionysus'. On the same page they are also called *Noluntas Patris*, and *Voluntas Patris*. Again according to Basil Valentine, they were said to be the equivalents of good and evil. [99] In addition a whole host of names was invented, to which the alchemist might add as he chose: the Red Lion and the White Eagle, the King and the Queen, the Golden Fleece and the Green Dragon, the Dove and the Crow, or, as in *Faust*, the 'roter Leu' and the 'weisse Lilie'. The Stone itself was always described as a combination of them all, or rather a state of unity in which they no longer existed as separate entities. Thus in Basil Valentine's view it was a condition in which 'evil must become the same as good'. [100] Fludd inserts as a comment on his diagrammatic representation of the opposites the words 'Deus tamen unus'. Starkey describes the Stone as a 'reconciliation of Contraries, a making friendship between Enemies'. [101] Very often, since the conflicting opposites were considered as being male and female, the Stone was called an Hermaphrodite. 'This Salt', says Valentine, 'is an Hermaphrodite among other Salts, it is white and red, even as you will have it.' [102] This symbol reached the pitch of absurdity when it was illustrated in the form of a repulsive human figure having both male and female sexual organs. But once again it was intended to represent the unitive and universal nature of the Stone. Equally common was the representation of the final stage by a marriage between the male gold and the female mercury, a marriage from which the 'Hermaphroditical Infant' was sometimes said to emerge.

An obscurer indication of the oneness of the Stone was the epithet of roundness occasionally attached to it. It was 'a round sphere, on which the goddess Fortune drives her chariot'. [103] Speaking, as it sometimes did, in the first person, the Stone was made to say by Ripley: 'I am by nature inclined to roundness.' [104] In this coupling of rotundity with double-sex there appears to be a reminiscence of the Platonic myth in the *Symposium*. According to the humorous story placed in the mouth of Aristophanes, there was once a golden age when some human beings enjoyed great power, by virtue of the fact that they combined both male and female in one; they were moreover completely spherical and able to roll rapidly and at will in all

directions. This extraordinary faculty brought them into conflict with Zeus, who in order to punish their importunity divided their spheres into halves, one male and one female. Since that time the man has had a yearning to become joined again to his female counterpart, and 'this meeting, this becoming one instead of two, is the very expression of his ancient need. . . . And the reason is that human nature was originally one and we were a whole, and the desire and pursuit of the whole is called love.' [105] The spherical and hermaphrodite Philosophers' Stone is clearly an expression of the same desire for wholeness. To produce the Stone, to be able to assume the divine power of determining the form of metals, was to become, at least symbolically, identified with the 'All in All'.

Recapitulating the stages of the *Magnum Opus* so far described, we have then first the belief that the microcosm and macrocosm are one, and identical in form and structure. This makes possible the whole symbolism of the transmutation of metals, and at the same time allows the alchemist to regard the stages of this transmutation as equivalent to stages in his own spiritual development. The first of these is 'death', represented by the putrefaction of the alchemical matter; it is a renunciation of individuality, a purification of the passions, but not necessarily an ascetic denial of their right to exist. So long as this preliminary stage continues, the work is said to 'rotate' about a central point in a torturous longing for peace. Once, however, the preliminaries are completed, rotation ceases, and the alchemist begins to be identified with a central point or seed within him, that is, he begins to acquire knowledge of what he believes to be an indwelling God. This is the source of a new life, which is not achieved in a flash in its entirety, but develops gradually and organically until it suffuses the adept with a feeling of complete joy and oneness, beyond the opposites of good and evil which encompass his normal earthly existence. This final stage of full identification with the central seed is symbolized as a marriage of male and female, or as an hermaphrodite: it is an assumption into totality in which all duality is subsumed. Thence the whole cycle begins afresh.

This is however, it must be emphasized, only one interpretation of the alchemical work. As is evident from the *Aurea Catena*,

it was possible to use the symbols in a less ambitious way, solely as an explanation of the laws of Nature. They could be regarded as symbols either of the individual or of the universe, since both were believed to be identical. Thus the rotating serpent was in a wider aspect said to represent the world at large, which like man himself was subject to an eternal cycle of death and rebirth, which it could only escape by an act of renunciation. Moreover, the extraordinary secrecy and confusion of all alchemical writings makes it difficult to determine precisely how much was intended by any particular author. Only in those cases where, like Croll, the alchemists openly admit a desire for mystical union, is it possible to say with certainty that this was their aim. Others may simply have intended to preach a spiritual detachment from worldly affairs, or the need for personal knowledge of God by means of prayer. And in any case there is never any attempt at an orderly presentation of the stages in their sequence. Since the Stone was the All, it was possible to begin anywhere and end anywhere, and every symbol could be used to represent any stage in the operations. In attempting to sort them out and to allot a separate meaning to each, I have therefore given not only a false impression of the degree of clarity reigning in the writings of the alchemists, but also to some extent of their beliefs. In avoiding a repetition of their obscurity, one is obliged to suggest definite meanings for symbols which were meant to convey unlimited associations. It is frequently difficult to see any distinction at all between the various stages: identification with the 'centre' is the same as the marriage of male and female for many authors, and so with the remainder of the symbols. This was however in the nature of alchemy itself. For the purposes of exposition it was necessary to speak of the One and All as containing two opposites, but at the back of his mind the alchemist could not really believe in their existence. The confusion of his theories was therefore part and parcel of his beliefs. In consequence, the literature frequently degenerates into a vague attempt at expressing the ineffable, helped along with some traditional symbols, and smugly convinced that in view of the complexity of the subject utter obscurity is inevitable. 'To give ourselves the trouble', said Welling, 'of affording a full explanation and reconciliation of all the apparently contradictory passages

in these our writings, to the satisfaction of every reader, is no concern of ours.' [106] It was this self-satisfied disregard for logic which in the end destroyed alchemy.

The pattern of symbols so far presented has however some justification, although it is only the barest outline of alchemical doctrines. It is true that as soon as any reasoned classification of their beliefs is made the alchemists appear to have been the spiritual ancestors of such men as Schopenhauer and Schelling, to have been the Western equivalents of Buddhists and Taoists. But the beliefs they held were dark and embryonic. It was not until these beliefs were brought into daylight and explicitly applied to the problems of living that they had any appreciable effect on the course of European philosophy. The man who imposed a pattern on the alchemical symbols and thus introduced them into the stream of current thought was the Silesian mystic Jacob Boehme. In order to obtain a clearer impression of this development it is necessary therefore to describe briefly what Boehme's pattern was.

CHAPTER II

JACOB BOEHME AND ALCHEMY

BOEHME'S influence in literature and philosophy is already well known in the case of such writers as Novalis and William Blake, Hegel and Schopenhauer. Since it might appear from what follows in later chapters that his influence on Goethe was equally great, it is as well to say at the outset that Goethe mentions his name only once in all his writings, and then only in a passing reference.[1] It is true that he probably knew of Boehme's philosophy either verbally, through his Pietist friends, or from the numerous long extracts contained in Gottfrid Arnold's work. But he never suggests that the mystic influenced or interested him in the slightest degree. On the contrary, when he was questioned concerning Baader, Boehme's interpreter, in the spring of 1814, he declared that he felt the man had something important to say, although for his own part he could not understand him. [1] On the other hand there were, as will appear later, numerous ways in which an indirect influence might have come about.

Boehme did however systematise the symbols of the alchemists and it is for this reason that his views deserve mention here. A recent expositor writes: 'Boehme did more than borrow a large part of his vocabulary from alchemy, he took over the whole alchemistic world-view, which he developed into a philosophic system.' [2] Nevertheless it is not as an alchemist, but as a mystic, in the sense that Meister Eckhart and Tauler were mystics, that Boehme has been celebrated, and this strengthens the case for regarding the alchemical treatises as something very much akin to a mystic's *vade mecum*. The case will appear the stronger when Boehme's use of alchemical symbolism has been examined.

Here again it is necessary to select. Boehme's labyrinthine

[1] *WA.* I. 30. 135. Goethe compares the effect on himself of Palladio's architecture with Boehme's experience of instantaneous revelation.

system, although more rationally elaborated than that of the alchemists, would in itself require a volume of commentary. There is however sufficient for the present purpose in his conception of the 'Seven Qualities of God'. These are described in sequence in his work *Aurora*, and spasmodically throughout his other books. For their interpretation I rely largely on Boehme's commentators, in particular H. L. Martensen and H. H. Brinton. These Qualities—'Qualitäten'—are perhaps better described as forms or forces or 'Outflowings', since Boehme, a self-educated cobbler, connected the word with the German *quellen*, to spring forth, rather than with its Latin origin. They represent the 'flowing forth' of the Divine nature: coequal and coexistent aspects of God which together constitute his being from all eternity. But although in the sum they are all simultaneously the being of God, viewed successively they symbolize his becoming. They can be regarded as forming a wheel or sphere—a common metaphor with Boehme—which is in itself eternally existent, but of which only one part is visible at a tangential point at any given moment of time. Each however is fully representative of God, since the whole, being infinite, is indivisible and wholly present in each so-called part. In this way Boehme attempts to solve the problem of the conflicting notions of static being and dynamic growth. The Whole exists from all eternity and subsumes within itself its own becoming. Moreover, the seven Qualities are also fully existent in every microcosmic organism; they extend throughout the whole range of being and becoming, from the smallest to the greatest, so that they express the nature of Man as much as they express the nature of God. Amongst other things, therefore, they represent Boehme's ideas on the origin and nature of the universe, in which everything exists and develops according to the same pattern.

The first three of the seven Qualities are called by Boehme the earthly ternary. The first he describes as the Abyss, the formless chaos, the bottomless and unoriginated Will. It is also characterized by such expressions as 'der Ungrund' and 'das Nichts'. It is thus the state of the world before its creation, the infinite regarded as nothingness, as opposed to the conception of infinity as boundless extension. It is also described as a 'contraction', and as a 'seed', that is, a concentrated potential force

which has not yet become reality. Within this first quality, says Boehme, arises the desire to mirror itself; it conceives a desire for substance: 'For the nothing hungers after something and the hunger is the desire which . . . conceives only itself and brings itself from abyss to byss, so that the nothing is filled.' [3] With this filling of nothingness the universe is created, and the second Quality makes its appearance.

The second Quality is described, since it brings with it extension in time and space, as an expanding force, in opposition to the contracting force of the first Quality. The two are regarded as in eternal conflict, and to them are ascribed the names of Darkness and Light, 'Nichts' and 'Etwas', the Wrath of God and the Love of God. The first is male, the second female, so that the latter is often called the Heavenly Sophia or Bride of God. She is however, it should be noted, of one substance with God, being the mirror of himself, and therefore the one is often spoken of in terms of the other, just as the active and passive categories of the alchemists were not entirely distinguishable. The conflict of these polar opposites causes the state of tension in which the universe exists. To them is due the movement of the planets in their orbits, and the spinning of the world about its axis, for, says Boehme, they act as it were from opposite directions on the axle of a wheel, and so cause it to rotate.

The earthly ernary is now completed by the third Quality, which is this very rotation. The components of the ternary are thus interdependent: the second springs from the first, and the opposition of these two results in the third. In this way the world becomes what it is, its nature being expressed by the three together. Every existent is held in tension by the possibility of its non-existence, expansion is possible only because contraction can also exist, Light depends on Darkness, individuation implies the possibility of fusion. At the same time these three Qualities represent a divine Trinity in which the First and Second Persons are united by a Third. As Martensen remarks, Boehme differs from most mystics in seeing God not as the nameless One, above all contrasts, but as manifesting himself in those contrasts. [4] The Trinity reveals itself in its cosmic manifestations, it is not separated from them.

This earthly ternary bears a strong resemblance to some of

the alchemical symbols already discussed, and the resemblance is not fortuitous, since Boehme refers throughout his writings to these three Qualities under the alchemical names of Salt, Mercury, and Sulphur, Salt being the contracting, Mercury the expanding principle, and Sulphur the symbol of their conflict. The parallel with the list of opposites in the *Aurea Catena* is striking, apart from the fact that Kirchweger, with the alchemist's typical disregard for the usage of other workers in his own field, chooses to describe the opposites as Sulphur and Salt, and reserves Mercury for his third principle. The alchemists did in fact frequently refer not to two but to three fundamental categories, although this introduced to their work so complex a factor that for the sake of clarity it was best omitted until this moment. Paracelsus equated Salt, Mercury and Sulphur with Body, Soul and Spirit [5] and thus recalled the common Christian doctrine that the Trinity is represented in man by these three principles of being. Similarly, the Philosophers' Stone was often said to combine not two categories but three, implying a perfect unity of all human faculties: 'The King is now imperishable', writes an anonymous author,' therefore body, soul and spirit are one.' [6] 'Lapis noster preciosus', writes another, 'compositus est ex tribus, scilicet spirita, corpore et anima.' [7] But here again there was no uniformity, and the three chemical substances were often presented in a quite different order. [8] The vagaries of alchemistic nomenclature need not trouble us however, since the essential similarity is clear. Here are two opposed forces, described variously as male and female, active and passive, Light and Darkness, contraction and expansion, and following upon their opposition there is a rotatory movement. In each case the symbols are the same.

This similarity goes deeper than the surface. In the *Magnum Opus* the symbol of rotation implied an approach towards identification with God, a return to the first matter. With Boehme also the earthly ternary ends in a similar way. The first Quality, as has been seen, is 'das Nichts'. The second, amongst its various other connotations, is described as Will. Here the qualities begin to have reference to the spiritual development of Man. Hartmann has interpreted the mirroring of the uncreated Will in the second Quality as follows: 'The same takes place in the microcosm of

man. By conceiving of his own self man creates a mirror in which he "feels" his own self, and thereby he becomes selfconscious and realizes his own existence as an individual being.' [9] It is this self-consciousness, this detached realization that 'I' am 'I', which the second Quality, in so far as it refers to Man, is meant to convey. But this very realization is in Boehme's view the cause of human discontent. The Will, it is said, becomes increasingly dissatisfied with its status as a separate being: 'for it finds itself now transformed from nothing into something, and being something is repugnant to it, for it is a state of unrest, whereas free Will is a state of peace.' [10] Its very awareness of individuality results in disquiet and it longs for the nothingness out of which it came. In order to be free, therefore, it must return to its source. 'Selfwill must return into the first mother who gave it birth. . . . But who will persuade it of this, that it should do so, for it has become something of its own, and shall it now return to its mother, and become nothing?' [11]

The third Quality thus corresponds to the alchemical return to the first matter and to the mother. It also refers to the synonymous symbol of rotation, since Boehme also calls it on many occasions the 'Kreuzrad' or cross-wheel. In its tortured desire for peace, the Will turns in a circle: 'it stands like a triangle or cross-wheel, which (since it cannot move from its place) begins to turn . . . [and] . . . the turning causes constant confusion and rupture, from which fear arises as the third form, woe.' [12] The wheel is portrayed as a circle with four radii forming a rectangular cross, thus: ⊕, of which the two arms represent the conflicting first two Qualities. At the same time the cross is said to be symbolical of the Cross borne by Christ and by every Christian. Boehme thus combines in one image two symbols of tribulation and sacrificial suffering.

This 'Kreuzrad' also makes its appearance on the frontispiece to the *Aurea Catena*—a later work than Boehme's—so that, if Goethe did not know of it through Boehme himself, he might well have encountered it here. It is shown as one of the ten links in the 'Golden Chain' itself, representing, like Boehme's Qualities, a progression in the becoming of God (see illustration). (The number ten is a variant probably due to Cabbalistic influence, since in the Cabbala this same progression is described

in terms of the ten 'Sephiroth'.) [13] Of these ten links the first three correspond to Boehme's first Quality, that is, they represent three aspects of that Quality which Boehme gathers under one head. Thus the first link is the first Quality regarded as Chaos, the second is the same regarded as incorporate matter, and the third is 'acidus', which appears in Kirchweger's list of opposites as the male, active force, and thus corresponds to Boehme's Wrath of God, the contracting, 'male' principle. The fourth link in the chain is 'alcalicus', the opposite of the third link, and thus equivalent to Boehme's second Quality. These two latter links are represented respectively by a vertical and a horizontal line, and it is by the combination of these two into the 'Kreuzrad' that the fifth link is formed. This fifth link is however designated 'the first matter of all sublunary bodies', that is, it makes apparent the relationship between the rotatory movement, the Cross, and the alchemist's 'return to the first matter'. Christ's death on the Cross and the Christian's symbolical acceptance of the same fate are equivalent to renunciation of selfhood and identification with the primal source.

Welling also echoes this account of the first three stages in the development of the cosmos. 'In truth,' he says, 'the Divine Being is the point or centre from which all things sprang.' [14] If, he continues, this point is regarded as developing a succession of other points, the result will be a straight line, and this straight line will be 'the first movement'. It will not however remain in one position, but, in some way which Welling does not explain, will begin to turn about its original point, which now becomes its axis. This is 'the second movement'. Thus again the three primary stages are a central point, or seed, an extension or expansion from that point, and a rotation. Since both Welling and Kirchweger wrote later than Boehme, it seems possible that they borrowed some of their ideas from him. This does not alter the fact however that Goethe could have become acquainted with beliefs very similar to those of Boehme through these two authors. As will be seen, he made considerable use of these three symbols in his scientific works.

The remaining four Qualities are now divided by Boehme into two groups: a transitional stage, and a second triad, corresponding in many ways to the first, and known as the heavenly ternary.

Here the meaning of the symbols has a more obvious application to the spiritual development of Man than to the growth of the universe. The heavenly ternary is the counterpart of the earthly, but represents the new life attained after regeneration. If the third Quality represents death and self-surrender, the fifth is rebirth in a realm of pure being. Between these two stages comes the fourth Quality, in which Boehme seeks to describe the instantaneous moment of passage from one to the other. It is frequently portrayed in the Amsterdam edition of his works (1682) as the point of contact between the apices of two triangles. The instantaneity of this contact he illustrates by calling the stage a 'lightning-stroke', and again by describing it as 'an ignition of life'—'eine Anzündung des Lebens'. [15] It is also however a moment of extreme terror, 'Schrack', since all desire for selfhood is annihilated, and the individual feels his life as a separate being passing away from him; it is as terrifying as the moment of death itself. When the lightning strikes the wheel, 'the wheel becomes a cross, and can turn no more, but stands trembling in the fierce power of the will of eternal freedom which is God the Father'. [16] Or again, 'the bright light of freedom . . . gleams again in the midst of the dark fear, and fills the fear with freedom, so that wrath dies, and the turning wheel stands still'. [17] Once again liberation and peace are symbolized by stillness, in contrast to the constant movement of ungoverned passion. In this moment of quiet, the first flash of union between God and Man, the central seed, or as Boehme often called it, 'das Centrum der Natur' is born.

Almost simultaneously with this cessation of movement comes the stage called by Boehme 'the gentle Love', 'the clear Water-spirit', the fifth Quality. All the preceding Qualities are now concentrated into a unity of Wisdom, a Wisdom symbolized, as in the writings of the Cabbalists, by a heavenly virgin, Aurora or Sophia. This virgin is, like the Philosophers' Stone, a hermaphrodite: 'The form was in God an eternal virgin in the wisdom of God, not a woman, nor a man, but both together.' [18] She combines in herself both male and female, active and passive; wisdom is thus regarded as the acceptance of these opposites in their entirety. But just as for the alchemist the attainment of the Stone was described as a union between the

golden King and the silver Queen, or their equivalents sulphur and salt, or sulphur and mercury, so too in Boehme the attainment of wisdom is symbolized as a loving embrace: 'there the Bridegroom kisses his Bride.' [19] By means of this sexual imagery, common to mystic writers, Boehme seeks to represent the feeling of wholeness and reciprocal integration which he himself experienced. He believed himself to have been identified during his trance-like states with the divine power: 'for God is the being of all beings, and we are as Gods in Him, through whom He manifests Himself.' [20] Through this marriage of heaven and earth the Christ-child was to be born in the believer's heart—it was to appear in its red and white coat, and grow until it filled his frame. [21] Thus Boehme associates his fifth Quality with the birth of the embryonic red and white Stone.

The sixth Quality has allowed Boehme's interpreters little success. He describes it as 'der Schall', which is translated as 'Intelligible Sound', but the meaning to be attached to these words has, I believe, never been demonstrated. Brinton writes: 'As he associates love with the visual sense, so he associates the sixth form with the auditory sense, and in describing it he seems at times wholly lost in his figure.' [22] Martensen says that the powers concentrated in the fifth stage are now led forth into intelligible separation and become distinct and audible. [23] Neither of these explanations makes sense in the way that the interpretations of the previous five Qualities make sense. One can only suppose that Boehme was attempting to convey here the impression of some auditory sensation received in a vision. Alternatively, since we are close here to the end of the cycle, the name may refer to that thunderclap associated by some occult writers with the heralding of a new age. There appears to be no connection between this Quality and any alchemical symbol.

The seventh and final Quality however is closely related to the Philosophers' Stone. Like the first Quality, it is represented as a seed, and sums up all the other Qualities in itself. It is 'like the seed of the other six spirits, which they have now together embodied, and made a spirit of it; it has the Quality of all the spirits and is the seventh spirit of God in the divine power'. [24] It thus shares with the Stone the characteristics of an entelechy,

capable as a seed of reproducing itself. It is also a final cause in that it represents the goal of the other six Qualities, and a first cause in that it is closely linked with the first Quality. In Boehme's favourite image of the wheel, the seventh Quality indeed comes full circle and joins the first: the end is the beginning. This final or primal stage of bliss is compared by Boehme to the perfection of gold; he explains 'that in Paradise, there is perfect life without vacillation, and without any false or evil lust; and constant day, where the people of Paradise are bright like transparent glass, the divine Sun shining through and through them, just as gold is pure through and through and without taint'. [25] In this image of transparency there is again a reminiscence of the Stone: Goethe's experiments at Frankfurt were directed towards making a transparent glasslike substance, and the expression is commonly used by the alchemists. Finally, Boehme speaks of the final Quality as a tincture—'die höchste himmlische Tinctur' [26]—once more recalling the Stone's quintessential nature.

The seven Qualities taken together are, it must be remembered, as much symbols of God's being and becoming as they are of the development of Man or any other microcosmic creature. They represent a totality which is as much present in the part as in the whole. In his work *De Signatura Rerum* Boehme attempts to demonstrate the truth of this with reference to many natural phenomena, particularly plants and other organic growths. But these applications do not concern us here; what is important at the moment is the chain of parallel symbols discovered in Boehme and the alchemical treatises. I have not attempted to distinguish any priority in the use of these symbols; many of the alchemists I have quoted wrote later than Boehme (Paracelsus and Croll being notable exceptions), and probably borrowed from him. There is however so close an interweaving that such a distinction seems unnecessary here. Boehme mingles in with the alchemical tradition in such a way that he may be said to be a part of it, certainly as far as Goethe's acquaintance with alchemy is concerned.

The Qualities can now be conveniently tabled. They are:

1. SEED. (Nothingness, formless Chaos, Abyss, male, contraction.)
2. DUALITY. (Mirror, Sophia, world of creation, female, expansion.)

3. ROTATION. ('Kreuzrad', return to first matter.)
4. STILLNESS. (Transitional stage, cessation of movement.)
5. UNION. (Male and female joined. The 'seed' is reborn.)
6. 'INTELLIGIBLE SOUND'.
7. SEED. (Tincture, Entelechy. The cycle begins afresh.)

There is in the first place an initial polarity and conflict of opposites, characterized under the general heading of male and female, Light and Darkness, and representing the state of tension existing in the world of Nature. This tension is not escaped, but overcome by the renunciation of personal differentiation, the death of selfhood. This 'death 'is symbolized at once as a rotation and as a return to the source of things, in which a vital spark of life is said to be discovered. By the nourishment of this spark the adept becomes reborn, he is identified with God, and this identification is represented as a union between male and female. Thus the rebirth is not an ascetic denial of life, but an acceptance of it in its totality of good and evil, an integration of the personal will with whatever the general will, or, as Boehme puts it, the divine will, may resolve or be. Finally, this integration is imagined as a quintessence, tincture, or seed, of great latent power.

Boehme thus imposes some measure of orderliness on the chaos of alchemical literature. But there is more reason for selecting him as a guide than this. Boehme was not merely a mystic who used alchemical language, he was also the inspiration of the German Pietist movement which began, under the leadership of Spener and Francke, towards the end of the seventeenth century. Although considerably weakened, Pietism was still strong enough during Goethe's adolescence to command some support in Frankfurt. His own mother belonged to a Pietist circle, and by his own account in his autobiography he was brought up in the atmosphere of this religion. But Pietism is an ambiguous term. [27] On the one hand it is taken normally to imply a pious attitude in religious matters, with perhaps a trace of quietism, and a somewhat Puritan outlook. At its highest it could profoundly influence such men as Bach and Handel. On the other hand many Pietists dabbled in mysticism, and some, like Gottfrid Arnold, whose tomes Goethe studied so intently, became religious fanatics. Moreover, in so far as the movement

was inspired by Boehme, it would have a natural tendency towards mysticism, although, being a popular movement, this tendency would not be equally apparent among all its adherents. For many, the belief that a conscious crisis was necessary to true religious conversion probably took the place of Boehme's annihilation of self-will; and their insistence on new birth, separation from the world, and acute repentance did not inevitably imply a belief in mystic visions. Where the mystical trend did appear, however, one might expect it to be coupled occasionally with a study of alchemy, and this appears to have been the case with Fräulein von Klettenberg. It is difficult to explain otherwise the preoccupation of this devout woman with studies which might be supposed more suitable for a Faust or a Paracelsus. The sect of Herrnhuter to which she belonged was moreover a branch of Pietism founded by the particularly occult-minded Graf von Zinzendorf. As has been seen, she evidently had some understanding of the secret significance of her alchemistic experiments, and it seems probable that she gained this understanding from her knowledge, if not of Boehme himself, at least of writings based on his teachings. When, therefore, she led Goethe to the study of alchemy, it is possible that she made him acquainted also with the body of symbolical tradition handed down to her in this way. This would at least serve to explain the fact that he retained all the essential features of the pattern of development just described, when he came to interpret the life of plants some fifteen to twenty years later. In the absence of any direct influence from Boehme himself, Goethe's acquaintance with the Pietistic view of alchemy alone was sufficient to furnish him with almost exactly the same knowledge of this mystical symbolism.

How far Goethe's initiation into these mysteries actually extended, he was careful not to reveal. There is however a passage in his autobiography, at the end of the eighth book, in which he describes, in the semi-apologetic tone he always adopted in referring to such matters, the mystical view of religion which he took up during the Strasbourg period, and which he derived principally from studying the various allegedly heretical opinions summarized in Gottfrid Arnold's *History*. Arnold's attitude, writes Goethe, was very much his own, and the chief

appeal of the work lay in the fact that it gave him a better opinion of those heretics who had hitherto been represented to him as either mad or godless. Some idea of the nature of their heresies can be gained from the authors dealt with—not that all were heretics in the strict sense of the word. They include such accepted Roman Catholic writers as St Teresa, St John of the Cross, St Ignatius Loyola and St Francis of Assisi, together with a long section of the excommunicated Molinos. England is represented by Sir Thomas Browne, Pordage, Jane Leade and the Quaker movement. Campanella receives equal mention, and the Rosicrucians are afforded some space. In addition of course all the main heresies of the Christian Church from the earliest times are exhaustively dealt with. The point which Arnold is trying to establish is that all these heretics bore witness to the truth of an indwelling God, a belief which Goethe never ceased to preach throughout his life. One can well imagine therefore the influence which this work must have exercised over his early years.

The foundation of his religious beliefs at this time was provided, however, according to Goethe himself, by neo-Platonic doctrines, together with elements of alchemy and the Cabbala. If, in what follows, neo-Platonism does not receive the full weight which Goethe attaches to it, that is not to deny its importance. Alchemy, as has been seen, bears many resemblances to neo-Platonism—it can in fact be described as a practical attempt to prove the truth of neo-Platonist doctrines —and similarities can also be traced in many Cabbalistic beliefs. This close intermingling makes it difficult to distinguish one element from another. Goethe's Frankfurt and Strasbourg studies were, however, more strictly alchemical than neo-Platonist. The only authors of the latter school whom he certainly read during this period are Iamblichus and Giordano Bruno. The complexities of Plotinus' *Enneads*, which he had read at the age of fifteen, may have been grasped by his superior mind even at so early an age, although it may be questioned how much he did in fact understand. [28] On the other hand, he ranged far and wide in his study of alchemy for at least two years before coming to Strasbourg: it was this, not the study of neo-Platonism itself, which caused him to be ignorant of the

stream of contemporary literature. Imagining the vast bulk of alchemical writings which Goethe must have read, one can readily concur with Gerhard Plathow when he states that such neo-Platonism as Goethe professed was drawn principally from 'magic and the Cabbala', rather than from Shaftesbury or Herder. [29] Moreover, the views he held are expressed throughout in terms of Christian and Jewish mythology, and might very well have been lifted entire from the *Opus Mago-Cabbalisticum.*

The religion Goethe professed at this time was in his own words a strange affair. 'I was pleased to imagine to myself a divinity which reproduces itself from all eternity', he writes; 'but since production cannot be thought of without variety, this divinity necessarily appeared to itself at once as a Second Person, whom we recognize by the name of the Son.' [30] Here are the equivalents of Boehme's chaotic Abyss or Will, which in its desire to create provides itself with a mirror, and appears to itself as a second person. With this second person or second Quality the world of things arises in all its variety, in opposition to the uncreated, undivided whole represented by the first Quality. 'These two', Goethe goes on, 'had now to continue the act of creation, and appeared to themselves again as a Third Person, who was now just as living and eternal as the whole. But with this the circle of the deity was closed, and even they would have found it impossible to create again a being fully equal to themselves.' [31] In this Trinity can be seen the first Ternary of Boehme, in which each stage develops out of the preceding one, and which also corresponded in a certain sense to the Father, the Son and the Holy Ghost. It is also possible that in speaking of 'the circle of the deity' Goethe may have had the occult wheel in mind, which appears in Boehme's scheme with the third Quality. But it will not do to press the analogy too far. I do not mean to suggest that Goethe had Boehme or any other specific author in mind when he wrote this passage, but rather that there is a large proportion of mystical-alchemical symbolism contained in it. In any case it is impossible to pursue the comparison with the seven Qualities any further, since Goethe now goes on to speak of the fall of Lucifer and his angels. Nevertheless the influence of alchemical notions is still apparent, for Lucifer himself represents that same active, con-

tracting tendency already noted in the *Aurea Catena*. As soon as Lucifer was created, writes Goethe, he bore witness to his 'endless activity' by himself creating the angels. These, since springing from him they all tended to 'concentrate' upon themselves, fell away from God, and 'from this concentration of the whole creation—for it had proceeded from Lucifer and had to follow him—arose all that we now perceive as matter, all that we imagine as being heavy, solid, and dark'. [32] This is again paralleled by Boehme's first Quality, which is also a 'concentration' and also produces the world of matter: 'from which and by which is formed the being of creation, as well as all kinds of colours, forms, and plants.' [33] Lucifer's fall was also said by Boehme to have been caused by this same concentration. [34] There is indeed an inextricable confusion and association in Boehme between the first Quality as the Wrath of God, evil, and discontent, and the same Quality as Lucifer, creation, and desire. The story of Lucifer's fall repeats the story of the coming into existence of the Trinity, so that it almost appears that by the very act of creation God himself fell, and was himself in need of redemption. Thus it is that in Goethe's account Lucifer's contracting force is opposed by a second force, characterized as an expansion. The world of Lucifer was incomplete in itself, for while it possessed all the advantages of concentration, that is, it was a world of matter, it lacked the balance which could be provided only by expansion. In the same way, it may be recalled, God was incomplete in himself until the opposed force of the Second Person arose. Left alone, Goethe continues, the world of Lucifer could only have achieved its own annihilation. The Elohim therefore considered this situation for a time, and finally decided not to await the inevitable self-destruction of Lucifer and his creation, but to supply the want by providing him with his own opposite. 'They gave to infinite Being (*Sein*), the ability to expand and to move against them (Lucifer's angels); the true pulse of life was restored again.' [35] From that time onward both systole and diastole existed on equal terms, now one, now the other gaining the upper hand.

Finally the same situation is repeated in the microcosm of Man. He too finds himself subject to these two opposed tendencies, his life is conditioned by the rhythmical alternation of

expansion and contraction, of self-assertion and self-abnegation, 'Verselbsten' and 'Entselbstigen'. Such a state of tension demands a redemption for mankind, which, like God himself and Lucifer, those almost identical beings, is driven by necessity to save itself through a third power. 'It is easily seen', Goethe writes, 'how salvation is here not only determined upon from all eternity, but is considered as eternally necessary, indeed that it must renew itself throughout the whole time of being and becoming.' [36] Salvation from the conflicting opposites is a cosmic necessity, and can only be achieved by a Christ-like renunciation:

> nothing is more natural, in this sense, than that the Godhead should itself assume the form of Man. . . . The history of all religions and philosophies teaches us that this great truth, indispensable as it is to mankind, has been handed down by various nations at various times in many different forms, and even in curious fables and images, according to the limited understanding of the peoples concerned. [37]

Thus, as in the alchemical work, the redemption from opposites is symbolized by the incarnation of God in Man. For the Christian, as for the Christian alchemist, this incarnation is Christ. For other believers, Goethe appears to imply, the same truth is conveyed in a form suitable to their understanding and circumstances. He himself makes no claim to be a Christian, but believes that the life and death of Christ was one manifestation of an event which must repeat itself over and over again in the life of every individual, and which is an essential part of the structure of the universe. There his account of his youthful philosophy closes. He does not appear, even when looking back at it in old age, to have rejected its fundamental conclusions.

From this account only the barest outline of his beliefs can be discerned. Nevertheless it is sufficient to show the origins of that conception of systole and diastole which plays so important a part in the whole of his later system of thought. It is by no means necessary to ascribe it to Boehme. Rather, the whole body of alchemical, neo-Platonist, mystical and occult literature which Goethe was studying at that time must be taken into account. In Boehme however most of the ideas which Goethe must have encountered are presented in a relatively systematic form. It is for this reason, and because he was of such great

importance for the Pietist movement, that Boehme's beliefs have been discussed here at such length.

What the account in *Dichtung und Wahrheit* does not show however, and what Goethe was almost certainly intent on concealing from his contemporaries, is the extent to which his later beliefs corresponded in almost every detail to the pattern of symbols described in this and the preceding chapter. It is true that he gave up his alchemical experiments before very long. But the lessons he had learnt from them remained with him in an only slightly modified form throughout his life.

CHAPTER III

FROM ALCHEMY TO SCIENCE

THE development of Goethe's thought away from alchemy and towards science was a gradual one. While he certainly abandoned his attempts at finding the Philosophers' Stone he made no abrupt break, and his science grows naturally out of his earlier study.

When Herder met Goethe in Strasbourg in the September of 1770 the latter was still engaged in his occult pursuits. 'Chemistry', as he wrote to Fräulein von Klettenberg, was still his 'secret love'.[1] But Herder's sharp criticisms drove them more and more into hiding: Goethe suffered severely from his friend's well-aimed attacks on his lack of thoroughness and his dilettantism, and his dreams of alchemy would have provided a very broad target. He was careful therefore to reveal as little as possible of his more imaginative flights. His plans for dramatizing the story of Götz von Berlichingen, as well as *Faust*, the symbol of his own private hopes, remained a secret. 'But most of all', he writes, 'I hid from Herder my mystical-cabbalistical chemistry and all the things related to it.' [1] To have spoken of this, he must have felt, would be to lay himself open to ruthless witticisms, against which he felt that he had little defence, at least as far as a reasoned and logical counter-attack was concerned. Not that Herder would have been entirely out of sympathy with Goethe's hopes—religion was never far absent from his own speculations—but he would certainly have regarded the occult studies of the younger man as further evidence of his ignorant dabbling. Alchemy was for Goethe a matter of faith, in spite of some of its more preposterous aspects. So he remained silent.

Nevertheless the meeting with Herder encouraged in Goethe a more critical attitude towards his faith. This took the form of

[1] See p. 6.

a secret desire to develop alchemy more consistently: 'sie konsequenter auszubilden, als man sie mir überliefert hatte.' [2] How he proposed to do this, or whether he ever succeeded, Goethe does not say, nor is it known at what time he gave up his study of alchemy in its traditional form. But the statement itself is of considerable importance as an indication of Goethe's attitude at this time. Almost the whole of his scientific work might well be described as a more logical development of traditional alchemical ideas. Viewed in this light it will appear as the outcome, not the negation of his early endeavours.

Strasbourg by no means saw the last of Goethe's preoccupation with the occult. From 1771 until 1775 his chief interest in this field lay not so much with the alchemists proper as with the theosophist Swedenborg. [3] This was well in keeping with his declared intention of adopting a more rational attitude, for Swedenborg's works are a curious mixture of scientific knowledge and occultism. He himself was for the first fifty years of his life an engineer, mathematician and physicist, and it was not until well advanced in age that, as a result of visions he had experienced, he attempted to unify his extensive factual knowledge with a religious view of life very similar to that of Boehme. A great part of his writings is devoted to evidence, drawn from the realm of natural science, which is intended to confirm his mystical interpretation of Christian doctrine. 'I intend to examine', he says, 'physically and philosophically, the whole anatomy of the body. . . . I purpose afterwards to give an introduction to Rational Psychology, consisting of certain new doctrines . . . through the assistance of which we may be conducted from the material organism of the body to a knowledge of the soul which is immaterial.' [4] The study of the body is to lead to conclusions on the nature of the soul. Again, he writes: 'To accomplish this grand end I enter the circle of the sciences, designing to consider thoroughly the whole world or macrocosm which the soul inhabits, for, I think, it is vain to seek her anywhere but in her own Kingdom.' [5] Thus Swedenborg attempts to meet halfway the increasingly rational spirit of his age. His fundamental beliefs are akin to those of the alchemists. Like them, he writes of the systole and diastole, the congruence of microcosm and macrocosm, the progression from 'primaries' to 'ultimates'.

There is a correspondence, he believes, between man's affections and the animal kingdom, between his will and the vegetable kingdom, between his 'outermost life' and the mineral kingdom. Like Boehme, he holds that God is mirrored in the creation, and the creation is mirrored in Man. He is often more concerned with the hierarchies of angels than with the circulation of the blood. But he differs from his occult predecessors in his obvious desire to enlighten rather than to mystify. At times this desire leads him to absurd lengths and destroys its own object, as when he gives a painstakingly accurate account of the geometrical arrangement of the heavenly host around the throne of Glory. In true eighteenth-century fashion Swedenborg prefers light to darkness—although he would like to combine the two—and he never expects blind faith. 'Spiritual truths', he maintains, 'are as capable of being comprehended as natural truths. Every one has the ability of perceiving the truth when made clear to his mind, and upon that perception he must base his faith.' [6] Similarly he asks 'how can you believe a thing when you do not see whether it is true or not?' [7] His scientific writings were therefore intended to offer this ocular proof, and, as he believed, to supply faith with a necessary rational basis. They were meant to reconcile science and religion which, since Newton's day, had begun to follow decidedly divergent paths. Above all, the religion which they proclaimed was that of the occult and theosophical tradition. Their appeal to the young Goethe, with his intention of carrying out a substantially identical project, must then have been great. Whether or not he continued to practise alchemy after leaving Strasbourg—and there is no evidence of this either way—Goethe's preoccupation with Swedenborg is alone sufficient to show that the plan was still in his mind.

This inference is supported by an entry in Lavater's diary of 1774, which seems to indicate that Goethe was still actively engaged with his scheme. 'We talked about chemistry again. Goethe has some remarkable experiments, a completely new style of chemistry all his own, like [gap], where everything is made so proper and seemly.' [8] The gap in the text, in which presumably the name of some person with whom Goethe is to be compared should appear, might well be filled with the name

of Swedenborg or with some similar writer.[1] Lavater was at this time in close contact with the Pietists of Goethe's circle, among whom Swedenborg was held in veneration, and it is unlikely that a 'new' chemistry could have meant for him anything but a new attempt on Swedenborgian lines. The chemistry of Lavoisier and Priestley would, for Lavater, have been quite the reverse of 'proper and seemly'. The very use of the word 'new' also indicates that it was not a question of a particular chemical discovery, but an entirely fresh way of dealing with chemistry. Coupling with this the fact that Goethe was still actively interested in Swedenborg until at least as late as 1775, it seems probable that he had developed some theory of chemistry based on theosophical parallels, or at least that he had some ideas for such a theory, sufficient to startle his friends.

His next attempt towards a rapprochement between mystical and scientific modes of thought is represented in his contributions to Lavater's *Physiognomische Fragmente* (1775). By this time Goethe had travelled some distance from his standpoint of 1773, where he could criticize Lavater's 'eternal lust for knowledge', his 'systematizing collections of facts'. [9] The *Fragmente* are certainly not mystical, although they have a somewhat occult ring about them; but then again they are not scientific. They are based on an ostensibly empirical comparison of physiognomical and psychological features, which was intended to provide a key for the judgment of character. Noses are said to be prudent or sanguine, certain hair-styles indicate voluptuousness, the shape of a forehead determines its owner's imaginative powers. In compiling these fragments Lavater spared no pains to measure every skull, plot every cheekbone, sketch every wrinkle, and the result is an imposing-looking mass of evidence. But the procedure was in fact unscientific in the extreme, and the characterizations depended more on Lavater's intuitive guesswork, or the desire to flatter a reigning prince, than on the supposed method. Moreover the whole work was

[1] The gap is represented by eight dots, both in *Der junge Goethe* and in *Schriften der Goethe-Gesellschaft*, vol. XVI, p. 290. If the dots represent letters Swedenborg could not have been intended, but even so Lavater is unlikely to have felt enthusiasm for any 'new chemistry' other than a religious one.

conceived in the typically occult belief that every detail of external appearance must correspond to some quality of the inward soul, and that this correspondence could be recognized by the initiated. Goethe's contributions to this semi-occult work with its pretensions to scientific thought were thus in conformity with his other intention of rationalizing alchemy.

The move to Weimar in 1775 marks however a decisive swing towards the observation of facts for their own sake. Here Goethe assumed the control of the ducal estates; and the care of the parks, mines, greenhouses and museums demanded a thorough grounding in forestry, geology, botany and many other branches of knowledge. He was forced to abandon dilettantism and devote his attention to a practical acquaintance with all these sciences. Linnaeus, the great Swedish botanist, became his constant study. He attended scientific lectures given by Professor Loder at Jena. Rock collections were made, and a geological description of Thuringia was written. The result of this more objective attitude was a piece of work in anatomy against which few objections could be raised from the point of view of logical method. This was the discovery of the intermaxillary bone in the human jaw, announced by Goethe to Herder and Frau von Stein on 27 March 1784. According to the contemporary view, the alleged absence of this bone in man distinguished him from brute creation. Since all animals possessed it, Man was a special creation of the hand of God. Goethe was able to show that the bone does in fact exist in the human jaw, although so closely merged into the bones on either side that no suture can normally be traced. In proving this he was merely repeating, though he did not know it until 1786 [10] what had already been discovered by Vicq d'Azyr a few years before, and by Vesalius, in a forgotten work, two centuries earlier; Goethe's merit lay in introducing the idea to his German contemporaries. But the question of priority is of less interest here than the indisputably scientific character of Goethe's demonstration. The evidence offered is apposite, detailed, and apparently innocent of any ulterior motive: a simple enarration of facts, in marked distinction from the physiognomical enthusings of the previous decade. Goethe had mastered the art of objective analysis and the dispassionate presentation of results.

It might appear from this that he had abandoned all thought of carrying out his former plan. But this was not the case.

Goethe's interest in physiognomy had not ceased with the publication of Lavater's work. In 1780, although he had given up hopes of ever achieving real success in this field, he could still write to Lavater that some of the main points were becoming clear to him. [11] In the following year, when he himself was lecturing on anatomy, he went further, and confided to Lavater that his new study was still linked with the old. 'I am using the bones as a text on which to hang all life and all humanity. . . . But I have resolved not to use the word Physiognomy, but rather to let the idea dawn on the audience through the whole course of the lectures. Perhaps I can give you something useful for your work from what I have noticed in my closer observation of animal economy.' [12] Goethe's study of anatomy was growing out of his former study of physiognomy, although the doubtful reputation of the latter kept him from speaking about it openly. The link between the two was probably supplied by Lavater's 'immensely important hypothesis' of the 'general homogeneity of each and every creation of Nature', which he intended to apply to physiognomy and which he had announced to Goethe in 1773. [13] This was precisely what Goethe claimed to have proved in his letter to Herder announcing the discovery of the intermaxillary bone. 'It is the keystone to Man', he wrote, 'And what a keystone! I thought of it too in connection with your "Whole".' [14] Later in the same year he was even more explicit. Writing to Knebel he said that the idea was already hinted at in Herder's *Ideen*; that it showed a 'consistency in the Whole' and that every creature was 'only a tone, a shade of one great harmony'. [15] This belief lay behind all his careful observations and accumulations of facts. The excitement which he felt at this discovery, which, as he wrote to Frau von Stein, stirred his very bowels, [16] was caused by the immense philosophical implications which it had for him. Man was no longer a special creation from the hand of God, but one facet of a great whole, which might manifest itself in countless forms. Thus Goethe found his intuitive religious convictions verified by the most stringent empirical enquiry; science and religion were not at variance but complementary to one another.

He was not willing however to reveal the importance which he attached to his work except to a chosen few. Herder, Frau von Stein, and Knebel were all told of it under a pledge of secrecy. As he wrote to the Duke of Gotha: 'I shall wait and see how the gentlemen of the profession regard a layman claiming to have made a new discovery in such well-known territory. For this reason I have kept silent on all the wider issues which might arise from it, in order not to become suspect too soon by making hypothetical statements.' [17] This was the reason for Goethe's unadorned proofs: he preferred to have his research examined as a serious piece of scientific work—which it was—and to say nothing of its significance for himself. At the back of his mind there continued nevertheless the belief, inspired in part by Lavater and in part by Herder, that scientific study could demonstrate the fundamental unity of Nature. This, not the observation of facts for their own sake, was his guiding thought, and although it had by now nothing to do with alchemy, it was a natural transition from his studies of Swedenborg and of physiognomy.

As a further indication of the trend of Goethe's ideas at this time, it is interesting to note his study of the so-called '*Arbor Dianae* and other metallic vegetations', of which he wrote to Jacobi on 12 January 1785. This was undoubtedly an experiment similar to that of which he had read in his Strasbourg days: the *Arbor Martis* of the iatro-chemist Lemery. [18] The iatro-chemists were far more practical than their alchemical predecessors, but their practice was still inspired by philosophical considerations. [19] Lemery's articles on this particular subject, which appeared between 1706 and 1708, were intended to show an interrelationship between plants and minerals. He had noticed that certain metals, when heated, bubbled up and solidified into plant-like shapes, and ascribed to these shapes the name of *Arbor Martis*. Other divine names were used according to the astrological associations of the metals concerned: Mars represented iron. The conclusions which Lemery sought to draw: that plants contained particles of iron and that the growth of both plants and minerals took place in an essentially similar manner, were such as could only have been conceived in an age when alchemy was not yet dead. They imply a belief in a crude

sympathy between natural objects which is quite foreign to the scientific spirit. The fact that they appealed to Goethe so many years later—only twenty-three years before the publication of Dalton's atomic theory—shows once again that what interested him in science was not so much the sheer knowledge to be acquired, as the possibility of establishing relationships between one realm of nature and another. Goethe was looking for analogies which would lead to some all-embracing law, not deducing separate laws for each sphere of operations.

His botanical studies, which began in real earnest early in 1785, show the same careful preparation as that which preceded the writing of his anatomical treatise. A microscope was set up, collections were made for a herbarium, and seeds were examined. By April Goethe was already able to announce to his friend Merck some 'pretty discoveries and combinations' [20] although without stating their precise nature. The work continued during the summer journey to Karlsbad and on into the following year. At some time during this period there were evolved some of the basic ideas for Goethe's theory of the metamorphosis of plants. But these, while they contain little to suggest that Goethe had abandoned his newly-acquired scientific attitude, now begin to show a certain recurrence to the ideas of his youthful philosophy. In the collection of draft notes and sketches which he prepared at this time[1] there is a remarkable re-statement of those theories of expansion and contraction which played so importance a part in the writings both of the alchemists and of Boehme and Swedenborg. Goethe is attempting to show that all the members of the plant—its leaves, petals, seeds, and so forth—are transformations of one fundamental form. In doing so, he speaks of a force in the life of the plant which effects these changes. 'During the progressive transformation of the parts of a plant a power is active, which I call expansion and contraction, although the expression is really inadequate. It would be better to represent it, in algebraic fashion, by an x or a y, for the words expansion and contraction do not express the effect in its entirety.' [21] This force, he asserts, is present throughout the whole plant, so

[1] I.e. those published in the Weimar edition as *Vorarbeiten zur Morphologie*, which cannot be dated precisely, but which were certainly written either in Italy (1786-8) or before that time. See editor's note, *WA*. II. 7. 227.

that now one tendency, now the other predominates. The sepals for example represent a contraction in this life-force, the petals an expansion, the male reproductive organ a contraction, the female again an expansion. [22] This theory is already an approximation to the final form given in the essay on *The Metamorphosis of Plants*, although there are important differences. But no evidence is offered for the statements, and although they were not meant for publication, it is reasonable to ask whether Goethe in fact had any evidence, or whether he was rather attempting an *a priori* demonstration on somewhat Swedenborgian lines. This suspicion is strengthened by the fact that, like the alchemists, he couples the male with the contracting, and the female with the expanding tendency, although to the unbiassed eye such associations are not obvious. While the two forms of reproductive organ are essentially different, Goethe can scarcely have observed any such contrast as this. Indeed, when he came to his final theory he omitted all mention of it, and spoke of both organs as exemplifying one contracting movement. This makes it all the more likely that he was attempting to fit facts to theories, and the likelihood appears the greater when, in the autumn of the same year (1786), he seeks to build a meteorological system on the idea of the same opposed tendencies —the presence or absence of 'elasticity' in the air. [23] If this was truly the case, Goethe had already departed considerably from the empiricism of his anatomical essay.

The botanical studies continued into the summer of 1786. By this time Goethe was already on the track of a complete theory which would explain the development of plants, and although many details were still not clear to him, he felt himself in possession of all the essential ideas. The months of June and July were a period of intense thought and enthusiasm. The Book of Nature becomes increasingly legible, he tells Frau von Stein; he is coming rapidly to an understanding of all living things; the world of plants seethes in his mind. [24] Finally, on 10 July, he pours out all his highest hopes:

> What pleases me most at present is plant-life. Everything is forcing itself upon me, I no longer have to think about it, everything comes to meet me, and the whole gigantic kingdom becomes so simple that I can see at once the answer to the most difficult problems.

If only I could communicate the insight and the joy to someone, but it is not possible. And it is no dream or fancy; I am beginning to grow aware of the essential form with which, as it were, Nature always plays, and from which she produces her great variety. Had I the time in this brief span of life I am confident I could extend it to all the realms of Nature—the whole realm. [25]

This was something quite unlike the comparatively unassuming discovery of the intermaxillary bone in man. Two years back, Goethe had been almost equally enthusiastic, and had also had wider issues in view than anatomy. But he had not made, even in his most intimate letters, any so far-reaching claim as this. To confirm an intuitive belief is one thing; it is quite another to claim an understanding of the essential form of Nature, to have the key to all problems, not only of plant-life but of all the variety of natural phenomena. Goethe felt that he had stumbled upon a secret of the greatest possible importance, and its unravelling was to occupy him for the remaining half-century of his life. He could not rest content until the feeling with which it inspired him had been made communicable to others.

It was with this ambitious project in mind that Goethe left, a month or so later, on his journey to Italy, where it began to assume its final shape. But before the theory itself is examined, there are one or two final indications of the part which mystical-alchemical ideas were still playing in Goethe's thought. For all his increased interest in science over the last ten years, he had not entirely given up his interest in the occult. Throughout the period he continued to refer to friends in his diary by means of astrological signs, and could speak of having had 'a good constellation'. [26] A curious entry of the year 1777 makes reference to 'the physiology of the basilisk'. [27] In 1781 he told Lavater: 'I am more inclined than any man to believe in a world outside the visible one, and I have sufficient poetry and life in me to feel even my own limited self expand into a Swedenborgian spiritual universe.' [28] He was, it is true, a constant foe of all obscurity and cant: over and again he reproaches Lavater with these vices. But he was still able to draw on occult sources for his imaginative work. The fragment entitled *Die Geheimnisse*, which was written between 1784 and 1786, the period of Goethe's first serious botanical studies, was to have been a poem on

Rosicrucianism. As late as 1786 he read, apparently with interest, the *Chymical Wedding of Christian Rosencreutz*, an alchemical work by the supposed founder of that Order. [29] Goethe may of course have kept his scientific and occult interests in separate compartments; but he did not abandon the one for the other.

There is indeed a hint, even at this early stage, that the two interests were closely united. As has been seen, Goethe left for Italy in a spirit of great enthusiasm, expecting to find there, amongst a thousand and one other things, further confirmation of his botanical theories. This expectation of success was symbolized for him by what he called 'the pheasant-dream'. He first refers to this dream in his diary on 19 October 1786, a month after his departure: 'The pheasant-dream is beginning to be fulfilled. For truly the things I am loading can well be compared with the most precious birds, and I have an inkling too of what is to come.' [30] An explanation is given in the version which Goethe prepared for the general public many years later. [31] Here it appears that towards the end of 1785 he had had a dream, in which he found himself in a large boat, approaching the shores of an island covered with luxuriant vegetation. Landing on the island he was struck by the great number of pheasants, whose beauty so impressed him that he bought as many as he could from the inhabitants. The dream ended as he returned home in his boat, laden with his prizes. Goethe clearly connected this with a promise of great success, and the impression was vivid enough for him to keep it in mind throughout the following year. His letters from December 1786 until February 1787 contain numerous references to the dream, and it is clear that in Italy he felt that the 'island' had been reached, and that he was loading up his 'Fasanenkahn' with treasure for the homeward journey. Included in this treasure there was of course the hope of bringing back the key to the whole system of Nature. But now Goethe makes a remark which suggests that the dream had for him more than the simple significance so far attached to it. The birds, he writes, were indeed pheasants, but, as in dreams everything tends to become transformed, they appeared to have long tail-feathers, spangled with coloured eyes, 'like peacocks or rare birds of Paradise'. There was a richness and profusion about these feathers, a glory

of colour which filled the whole boat, so that there was scarcely room for the coxswain and oarsmen, and, as the birds were arranged with their heads inward and their tails hanging over the gunwhales, it seems that they formed a great circle or ellipse of shimmering iridescence, 'den herrlichsten Schober . . ., den man sich denken kann'. This image is certainly a magnificent symbol of future splendour. But that is not the whole of it. The 'peacock's feathers' were a widespread symbol in all alchemical literature, representing either the Philosophers' Stone itself or the stage in the *Magnum Opus* immediately preceding it.[1] 'It is necessary that you persevere in the work', writes Paracelsus, 'until the peacock's tail is quite consumed . . . and the vessel attains its degree of perfection.' [32] Or again: 'when the dryness begins to act upon the humidity, various flowers of different colours appear in the glass, just as they appear in the tail of the peacock, and such as no one has ever seen before.' [33] This glorious array of colour had therefore precisely the same meaning for the alchemist as it had for Goethe. It implied totality, the combination of all possible varieties, perhaps also the peace of the rainbow after tempests. A Freudian psychologist suggests that it possibly referred also to the 'characteristic colours of visionary experiences'. [34] At all events it was a symbol of triumph, and in Goethe's dream it is the peacocks, not the pheasants, which play the important role. The feature of the dream which made it important to Goethe was the blaze of peacock's eyes, not the brown pheasants, the circle of shining beauty, not the trophies of a shooting expedition. There was, as he says, a simple substitution in the dream: the pheasants acted as a screen for the true symbol of the peacocks. In addition, the circular arrangement of the brilliant feathers may have represented that 'coruscation' towards the centre mentioned by Vaughan.[2] It is therefore at least a possibility that the dream was connected in Goethe's mind with recollections, either conscious or unconscious, of alchemical symbols. If this surmise could be proved correct, there would be a strong link between Goethe's enthusiasm for his botanical theory and his former enthusiasm for the equally miraculous Philosophers' Stone: both

[1] See the striking reproduction in the coloured frontispiece of Read's *Prelude to Chemistry*.

[2] See p. 27.

were keys to the universe, and both were symbolized in the same way. More than this, Goethe's whole quest for perfection in Italy might appear as a spiritual aim identical with that of the alchemists.

It is however too soon to form any conclusion on this point. The most that can be said is that Goethe's interest in the occult was not shouldered out by his scientific studies. In 1771, under Herder's influence, he begins to feel a growing dissatisfaction with the obscurity and the deliberate mystifications of the alchemists. But he does not abandon the whole system as valueless; rather he sets out to develop it on more logical lines. From 1771 until 1775 he is struggling with the difficulty of communicating the inexpressible, and turns to Swedenborg's semi-scientific, theosophical analogies for assistance. By 1774 he has some ideas for a 'new chemistry', presumably on Swedenborgian lines, of which no more is heard. In the following year he contributes to Lavater's work on physiognomy, with its ostensibly scientific method and its substratum of quasimystical doctrines. The end of 1775 sees him forced into adopting a more objective attitude, as a result of which he produces, in 1784 ,an anatomical treatise which is irreproachable from the scientific point of view. But although there is a steady movement throughout this period towards empirical observation, Goethe's mind is still set upon an aim not far removed from that of the alchemists: the discovery of a key to the universe. The anatomical study itself, for all its accuracy, springs in part from Lavater's physiognomical hypothesis. Goethe is still concerned with seeking analogies between the vegetable and mineral kingdoms. And when he begins to formulate his theories of botany, it is to the alchemical systole and diastole that he seems to turn. He no longer retires to the attic in search of a Virgin Earth or an Elixir of Life, it is true. His studies now bear the mark of a much greater objectivity. But it was still possible for him to use the microscope and the trowel for an essentially similar purpose: to discover through the examination of the microcosmic detail the nature of the Whole.

Goethe's attitude towards alchemy, as defined some twenty years later, confirms this point of view. 'It is', he writes, 'a misuse of genuine and true ideas, a leap from the ideal, the possible, to the reality, a false application of genuine feelings, a

lying promise, which flatters our dearest hopes and aspirations.' [35] This condemnation appears sweeping enough, but it does not destroy root and branch. Alchemy is a misuse, a false application, a lying promise, but in each case there is something genuine at the heart. It is not a totally absurd system, but one which 'flatters our dearest hopes'. What is wrong with it, apparently, is its method: it is a 'leap from the possible to the real', in other words it does not demonstrate in a logical way the steps by which it arrives at its conclusions. Goethe seems to suggest that the acquisition of the Philosophers' Stone—in its symbolical sense of course—is still a possibility, perhaps even that it is his own dearest hope, but that the alchemists set about their tasks in the wrong way. His criticism of their lack of logic still holds good, as it did at Strasbourg, but still also does his secret sympathy with their teaching.

PART II:

SCIENCE

CHAPTER IV

THE METAMORPHOSIS OF PLANTS

By the spring of 1787 the botanical work was beginning to take definite shape: it had crystallized into the concept of the 'Urpflanze', the primal plant, which was to represent in itself the whole nature of the vegetable kingdom. At the same time, Goethe had lost some of the confident tone which marks his enthusiastic outbursts to Frau von Stein in the previous year. He swings now from the delight in discovery to a cheerful recognition of the extensive labour which he still has before him —and then back again to ecstasy as he finds his theories confirmed. In the same way also he seems to vacillate in his conception of the Urpflanze. On the one hand he appears to regard it as a really existing plant, of which it is possible to find a living example. As he had told Frau von Stein, it was 'no dream or fancy'. Amid the wealth of flora in Sicily he writes: 'Faced with so many new and renewed forms, my old whim occurred to me again, that perhaps in all this host I might find the Urpflanze. For there must be one.' [1] This appears to make it perfectly clear that the Urpflanze was itself one among many other plants. But the words immediately following these give rise to doubt: there must be some such plant, Goethe goes on, for 'otherwise, how should I know that this or that form is a plant, if they were not all fashioned after one pattern?' [2] This seems to imply something more like a Platonic Idea, and the case for regarding the Urpflanze as an ideal form is strengthened when Goethe writes a month later that Nature herself will envy him his 'model', with which he will be able to invent as it were an infinite number of plants, all based on the same law of development. [3] The Urpflanze now seems to represent a system, an ideal plant embodying the essence of 'plant-ness', and not to be pinned down to any particular form such as could be found in Nature. But the question of its reality or unreality is further complicated by Goethe's discussion of the subject with

Schiller. When Goethe outlined the Urpflanze to his friend, the latter remarked that it was not a reality which Goethe could have observed, but an Idea. This imputation nettled Goethe, who retorted that he was pleased to find that he could have ideas which he could see with his own eyes. He was thus inclined, on occasion, to regard the Urpflanze as both real and ideal at once, to seek the ideal in the reality. Later in life he modified his views to the extent of describing the Urpflanze as 'a limited concept'. He had progressed, he said, while in Sicily, from this towards the idea 'of a regular and even, although perhaps not always identical formation and transformation of plant-life, from the roots to the seed'. [4] The essential feature of the Urpflanze was thus a pattern of development; a pattern which Goethe believed to be present in all forms of plant-life, although disguised and transfigured in various ways in various species. This view he repeated in another passage, which, like the one just quoted, was not intended for publication. He had risen to the idea, he wrote, that the world of plants must have an internal law from which the various manifestations could be derived. This was 'still conceived in a sufficiently concrete manner in the form of the Urpflanze'. [5] His intention is thus best described as an attempt at defining a certain regular pattern of development to which all plants more or less conformed. A plant which manifested the pattern in its entirety, could such a plant be found, might perhaps be given the name of Urpflanze. In this case the ideal would be seen as a reality. In all other cases however the Idea would be present, although masked by the deviations from the norm in each individual plant.

Goethe's language in describing the progress of his discoveries to his friends provides further evidence of his aims. On 28 August 1787 he writes to Herder of his studies in 'natural history', and connects them with Herder's definition of God. 'I think I am getting very close to knowing how things are organized. These manifestations—not fulgurations—of our God will be a delight for you to see.' [6] The Urpflanze can almost certainly be numbered among these 'manifestations'. In describing it in this way, Goethe may have had in mind the tenet of Spinoza, defended by Herder, that 'God is a circle, whose centre is everywhere, and whose circumference is nowhere'. God,

Herder had written, had 'so to speak, limited himself in the being of each organization, and there acted, as God alone can act, in accordance with undeviating, unchangeable and eternal laws'. 'Undivided and indivisible', God's being filled every atom. [7] The Urpflanze was thus one manifestation of this omnipresent, immanent divinity. The laws of its development were the eternal laws of the development of God, represented on a microcosmic scale. Much the same is implied when Goethe writes, some months later, that he has come across a 'One and All' in botany, which fills him with wonder. [8] This too was inspired by the reading of Herder's *Gott*, and once again his meaning appears to be that the Urpflanze demonstrated the universality of the divine being, even in its smallest manifestations. If God was present everywhere he must also be present in the plant, and it was this which Goethe sought to demonstrate.

The *sine qua non* of Goethe's Urpflanze was the theory of the leaf, which he correctly perceived to be the fundamental organ of the plant. The theory was somewhat summarily expressed in the phrase 'Alles ist Blatt': everything is a form of leaf. Throughout its length, 'backwards and forwards, the plant is nothing but leaf, so inseparably united with the seed to be, that the one cannot be thought of without the other'. [9] The leaf was the 'true Proteus, which could conceal and reveal itself in all forms'. [10] That is to say, every part of the plant can be shown to be a modification of some leaf-like shape. Petals, for example, might be described as coloured leaves; in fact, Goethe was able to find some specimens in which a series of leaves could be seen gradually passing through barely perceptible transitional stages until they had, so to speak, become petals. [11] Stamens and pistils could be shown to have derived their shape in a similar manner. An example which particularly attracted Goethe's attention was that of a tulip, in which one of the stem-leaves had grown into the corolla, where its upper half had become united with one of the petals. This, Goethe remarked, was 'a curious case of a leaf being at one and the same time a stem-leaf and a petal'. [12] In another specimen, the upper half of a leaf was coloured like a petal, while its lower half remained green. By these examples he sought to show that all the parts of the plant developed their shape from the original cotyledons, or

seed-leaves, of the infant shoot. This was, in the opinion of a recent historian of biology, an amplification of a doctrine of great importance, [13] and it is today, in a slightly modified form, an elementary part of botanical knowledge, although in Goethe's time the theory was not widely held. On this basis the remainder of his theory was constructed.

The point at which Goethe differs, however, from those of his contemporaries and predecessors who had held similar views, lies in the implications which he saw in the discovery. The intermaxillary bone had been more than a contribution to anatomy. For Goethe it had shown that every creature was 'only a tone, a shade of one great harmony'.[1] So also with the Urpflanze: perhaps here also he saw, in his demonstration that the leaf appeared, transformed, in all stages of the plant's development, a confirmation of his belief that the Whole was present in all its parts. He had noted long ago in his Strasbourg days the phrase from the *Phaedo:* 'that the parts must resemble each other and the whole.' [14] Here the plant was the whole, and the whole was leaf: 'Alles ist Blatt'. But at each stage in the plant's development there were leaves, transformed now this way, now that, so that all the parts had a basic similarity, and all in turn resembled the whole. Just as the intermaxillary bone had shown that Man was not a special creation from the hand of God, but that all animals were variations on a single theme, so here, within the limited unity of the plant, forms as apparently distinct as petals and seed-coverings were seen to be modifications of one fundamental organ. In this sense, that the leaf was at one and the same time its individual self, and the basic form of the whole plant, Goethe felt himself justified in calling his botanical discovery a 'One and All'.

To suggest however, as Bruno Wachsmuth has done, that the leaf was itself the Urpflanze is, I think, to mistake Goethe's purpose. [15] A leaf is not a plant, however great its potentialities. Moreover, at one period of his life, Goethe thought it possible to find the Urpflanze in a particular place, namely Sicily; he could have found leaves anywhere, whereas his search implies that he was looking for a definite specimen. The leaf-theory in itself, though important, was merely one aspect of the work which

[1] See p. 59 above.

Goethe finally produced, and in that work the emphasis is laid not only on the proposition that the leaf is present in all stages of the plant's development, but also on the manner of that development. The Urpflanze, in Goethe's own words, was a manifestation of an internal law governing the growth of the plant. In order to demonstrate this law it was necessary first to prove that the parts were all transformations of one organ. But the law itself represented a pattern; it was concerned with the way in which the transformations took place.

Two years after Goethe left Italy, in 1790, the essay entitled a *Versuch, die Metamorphose der Pflanzen zu erklären* was published. In it the ideas which had clustered in his mind for the last five years or more were presented in an orderly form, with all the external appearance of a normal scientific treatise. There is scarcely a suggestion in it of any ulterior motive, any more than there had been in the anatomical essay. But if Goethe had had reason to withhold from publication the beliefs which had inspired the earlier work, on this occasion he had all the more cause. The word 'Urpflanze' in fact appears nowhere in the *Metamorphosis* essay, although it is fair to assume that Goethe intended to define his primal plant to some extent, at least in so far as he was able to present the necessary evidence. As he wrote later, the idea of an inward law of development was still summed up 'concretely enough' in the form of the Urpflanze, and it is likely that the 'typical' plant described in the essay bears a strong resemblance to it. I shall therefore continue to use the word, with the reservation that the 'typical' plant is not precisely the same thing.

Perhaps the sole hint that the essay is not meant purely and simply as a scientific treatise occurs at the beginning of the work. Here Goethe compares the 'normal' metamorphosis of the plant, by which one form of the leaf is transformed into another, with a spiritual ladder, 'eine geistige Leiter'. [16] At the end of this progress the 'summit of Nature' is reached, the reproduction of the plant by means of the union of the two sexes. If Goethe had any symbolical purpose in mind, this mystical symbol of the ladder, on which the soul mounts up to its heavenly marriage, would have suited him well. In another passage—once again, one not intended for publication—he speaks of 'metamorphosis

in the higher sense' and says that it has already been excellently portrayed by Dante. [17] But in the essay itself, apart from the reference to the ladder, there is nothing but a careful description of the plant.

First, Goethe demonstrates the thesis already met with, that the successive developments in the growing plant are all metamorphoses of a single organ, the leaf. But the leaf is not merely transformed, it is also purified, or, to be more accurate, the leaves on the stem receive progressively a more purified sap. The leaves near the base of the stem, close to the roots, are filled with a crude sap, but as the plant becomes more open to the influence of light and air, the succeeding leaves show a greater refinement. [18] At each stage in the development of the stem, that is at each node, the sap arrives 'in a finer and more filtered state', [19] and, 'since now the cruder saps are continually drained in this manner, and give rise to purer—the plant meanwhile perfecting itself step by step—the period prescribed by Nature is finally reached. . . . The epoch which hitherto we have been studying is now past, and a second is approaching, the epoch of the Flower.' [20] This purification of the sap is thus a preparation which permits of an entirely new development in the plant. But together with this purification, the form of the leaf is also said to be perfected. At first the inferior leaves, or rather the cotyledons, are seen to be thick and mis-shapen—*unförmlich*: [21] this is easily observable in the first young shoot of the common bean. The cotyledons, says Goethe, are scarcely like leaves at all and might well be mistaken for a separate organ. [22] But as soon as the 'true' leaves begin to appear, they assume a definite and unmistakable shape. The veins become more marked, the edges of the leaves more sharply contoured. [23] Finally, when the leaf has reached its 'greatest development' [24], the new epoch begins. The leaf is purified and perfected to the fullest possible extent.

The words 'purification' and 'perfection' are of course capable of a double meaning. If Goethe had meant his simile of the 'spiritual ladder' to be taken seriously, this again was precisely the kind of language he might have used. Moreover, the preparatory stages of the *Magnum Opus* were also frequently described as a purification of the baser elements, so that the

'pure spirit of the metal' could rise to the surface. The Golden Son, wrote Paracelsus, could not enter into an impure body, [25] and therefore the 'matter' must be purged of all ignoble qualities. Goethe of course includes nothing in his essay to suggest such an implication as this, that the metamorphosis was a parallel to a possible spiritual development in Man. But in a much later work he indicates reasonably clearly that such was in fact his intention. He is describing a theory of pollenization put forward by the botanist Schelver, to which he had at first been opposed, but with which he now inclines to agree. 'Schelver', he writes, 'pursues the steady progress of the metamorphosis, which as it proceeds, ennobles itself, so that all the material qualities, the lesser and baser parts, are gradually left behind, allowing the higher, spiritual, better qualities to appear in greater freedom.' [26] This obviously refers to the purification of the sap. But human parallels have now slipped in: the metamorphosis represents an 'ennoblement'; gross matter is described as common or base (das Geringere, Gemeinere), and the refinement of this matter leads to 'greater freedom'. The final state is not only spiritual, but also higher and better. These are not scientific terms. Nor are those of the ensuing sentence. 'Why then', Goethe asks, 'should not this pollenization (i.e. the theory proposed by Schelver) not also be a liberation from the burden of matter, so that at last the plenitude of the profoundest, innermost depths may come forth with all its living and fundamental power, and partake in an infinite generation?' [27] The leaves, having become transformed into the sexual organs of the plant, give out their rarefied pollen, and are now completely 'liberated from the burden of matter'. This is the 'greater freedom' which was to be achieved when the baser parts had been left behind. Goethe's intention here is clearly symbolical, and the symbolical element is only emphasized by the phrase 'die Fülle des eigentlichst Innern'. It was precisely this release of inward, unconscious forces which the alchemists, like the mystics, hoped to achieve by their purifications. This was the meaning of the alchemists' 'seed of gold', which was to be released from its imprisoning imperfections. Goethe's sentence is in fact capable of two entirely different interpretations: on the one hand the mystical, on the other the botanical, which is merely a description of the

pollen as a purified sap, liberated from the male reproductive organ at the moment of pollenization. There is therefore good ground for believing that when Goethe spoke, in the essay of 1790, of the purification of the sap and the perfection of the leaf, he also had a similar symbolism in mind.

This interpretation is borne out by the passage in that essay in which Goethe speaks of the purification as a removal of the 'watery' elements. Plants which grow in moist surroundings, he notes, are less refined—weniger verfeinert—than those which grow in a drier atmosphere. [28] 'It has been noticed', he continues, 'that copious nourishment hinders a plant's flowering-stage, whereas moderate, or even scanty nourishment promotes it.' [29] This association of moisture with the earth and with imperfection, and of dryness with the heavens and perfection, was to play a part also in his meteorological theories.[1] It seems probable that it was derived in part from some such passage as that in the *Aurea Catena*, in which Kirchweger states that 'the nearer a subject is to the centre, the more strongly it is fixed, if only it is not hindered by the copious and continually rising moisture'. [30] The 'moisture' seems here to be associated with the elemental passions, which prevent that full identification with the fixed and immutable centre which was the goal of the alchemist's ambition. In the same way, Goethe appears to have believed, the plant could only reach the 'summit of nature' by purifying itself of the moist sap which filled and coarsened its leaves in its early stages.

There is more evidence of this same double intention in Goethe's theory of the development of the plant as a whole. The ideas of expansion and contraction, with which he was experimenting in 1786, here appear in their final form. There are, he says, six stages in this development, each proceeding out of the one immediately preceding it, and marked by an alternation of these same expanding and contracting tendencies. Firstly, there is the seed of the plant, but having mentioned it Goethe leaves it out of account and calls his first stage the expanding, upward growth of the stem. The second stage is seen when the stem, and the leaves it bears, begin to contract, until suddenly there appears the calyx, a collection of sepals around the central

[1] See Ch. VI below.

stem. (In styling the calyx itself a 'contraction', Goethe meant that the sepals themselves are smaller than the stem-leaves, not that the whole calyx was a contraction; the calyx is of course an expansion, if compared with the width of the stem.) Thirdly, the 'force' of the plant expands again to form the petals, and again contracts, in the fourth stage, to form the reproductive organs. The fifth stage is marked by a further expansion, as the leaves are again transformed into the fruit, or seed-coverings, and the last stage, a contraction, is the formation of the seed within this fruit. 'In these six steps', Goethe concludes, 'Nature in unresting sequence completes the eternal work of the bisexual reproduction of plants.' [31]

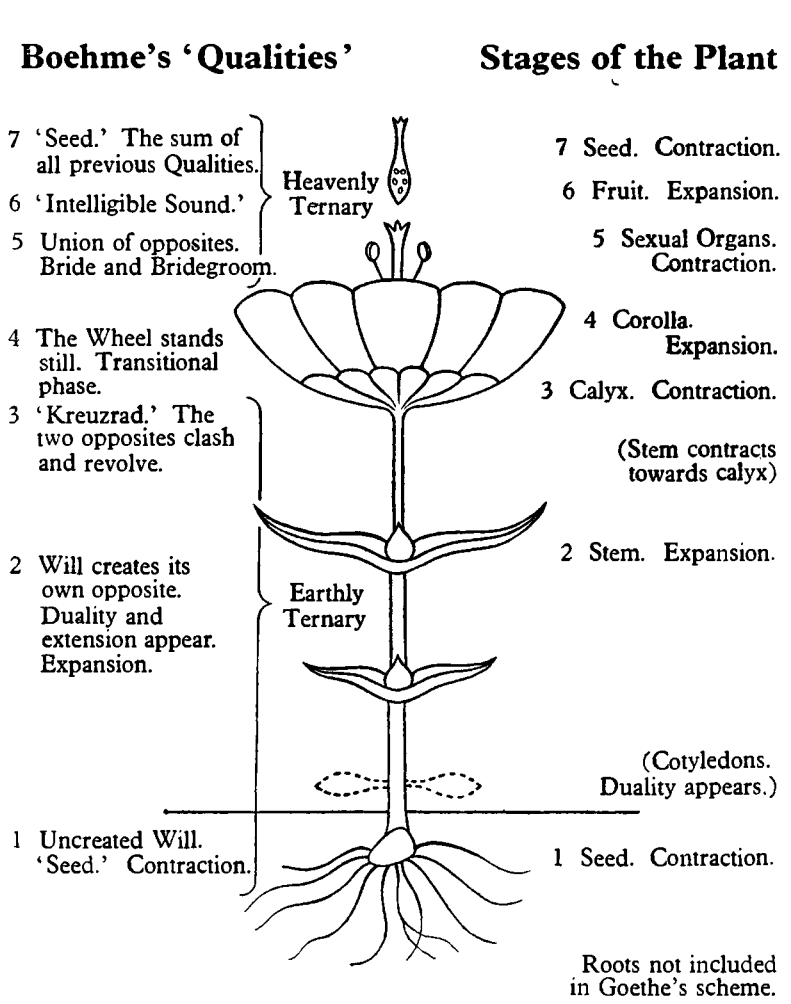
This description, as a botanist has pointed out, is one which will fit a good many annual plants, if one disregards the insistence on the alternating tendencies. [32] The features mentioned are by no means extraordinary, and the same writer, noticing Goethe's special interest in the gentians, has suggested that a variety of this plant comes nearest to fulfilling all the requirements of the Urpflanze. So simple is the description, in fact, that one is inclined to ask why, if this was the primal plant, Goethe was so enthusiastic about it. Why this pattern rather than another? The reason can perhaps be traced by means of those same opposed tendencies. Julius Richter has remarked that the systole and diastole are present as the first two stages both of the Urpflanze and of Boehme's God. [33] This is not strictly accurate. As has been seen, Goethe omits the initial seed, which would be a contraction, from his scheme, and begins with the expanding stem. But Richter is right in essentials. If we compare not the stem and the calyx, which Goethe calls the first and second stages, but the seed and the stem, with Boehme's first and second Qualities, there are some striking similarities. Boehme in fact does describe his first Quality as a seed, being the universe *in potentia;* and his second Quality is the emergence from the seed of the world of appearances, corresponding perhaps in the plant to the emergence of the stem. Coupling with this the fact that they represent also a successive contraction and expansion, there is indeed a close parallel to the first two stages of the Urpflanze.[1]

[1] See the diagram of the Urpflanze on p. 82.

The resemblance becomes truly striking, however, when we go beyond the first two stages. Boehme's third Quality is symbolized by him as a wheel, a 'Kreuzrad'. It is the equivalent of the 'circulation' of the alchemists, the dragon or serpent which forms a circle, holding its tail in its mouth. The goal of the alchemist is release from the torturous movement of the wheel, and identification with its central hub, implying cessation of the wheel's movement. This was also sometimes expressed as a 'suddain and miraculous coruscation' of radii striking from the centre to the circumference, or, as some said, from circumference to centre. Or again, to quote Welling's theory, the first three 'movements' were a point, a straight line and a circle. In the Urpflanze, the third stage is represented by the calyx, an innocent enough feature, but one which, in Goethe's description, embodies almost all these symbols. It is, to begin with, circular in shape, and succeeds the initial point of the seed and the straight line of the stem. More important, it is, as Goethe describes it, a collection of sepals arranged about a centre: it could, with no great stretch of the imagination, be regarded as the radiating spokes of a wheel. This is the point which he emphasized. Over and again, in the short passage which treats of this part of the plant, he repeats the idea that the transformed leaves, now sepals, are 'collected round an axis', [34] 'arranged round the axis of the stem', [35] 'collected round a single point'. [36] In the poem on the same subject the sepals are described as 'pressed round in a circle about the axis'. [37] In describing, in his private notes, a similar feature in the *Iberis umbellata*, Goethe actually uses the words 'spokes' and 'wheel'. 'The flowers which first develop at the end of the *spokes*', he writes, 'are white, with a little violet. As soon as the *whole wheel* has developed it becomes blue.' [38] And not only the idea of the wheel with its axis, but also that of the radiating centre, is mentioned with equal frequency. The sepals are said to be 'collected round a common centre', [39] 'joined about a centre'; [40] they form a 'radiating wreath'. [41] So important does Goethe consider this phenomenon that in his concluding paragraphs he describes the 'collection of various organs about a centre' as one of the cardinal features of his theory. [42] If he had wished to conjure up in the reader's mind the image of a central point radiating its spokes

in all directions, a sun-like symbol of approaching perfection, he could hardly have gone further without openly stating his intention. Some of the expressions which he used in his later botanical writings do however serve to define his meaning more closely. Thus in another of his private notes he writes that the plant proceeds by a sequence of expansion and contraction towards the ☥. By this symbol he may mean the calyx or he may mean the cross-wheel, ⊕, of Boehme and of the *Aurea Catena*. At all events, he continues by remarking that 'at last the plant, so to speak, suddenly resolves to reach its end by means of opposed forces'. [43] This appears to have little to do with real plants, which can scarcely be said to resolve on any course of action. But if the anthropomorphism be accepted for a moment, it might well refer to the opposition of activity and passivity, represented in alchemy by the wheel, and overcome only by accepting them in their entirety. The attainment of this end was achieved, as has been seen, by a renunciation of individual qualities. This, too, appears to have been in Goethe's mind, when he wrote of the leaves of a plant 'losing themselves' in the sepals of the calyx. [44] Once again, the expression appears only in his private notes—he would not allow himself to use such language in his published work. But it surely suggests the idea at the back of Goethe's mind that the stem-leaves at this stage lost their separateness, and became members of one whole. Finally, it must be remembered that the whole progress of the plant was a purification, an ennoblement. Nothing was more natural, within the framework of alchemical beliefs, than that such an ennoblement should derive from complete self-sacrifice, through 'death and rebirth'. This was the gist of Goethe's comment when he learnt that an earlier botanist, C. F. Wolf, had already propounded, although in a different form, his theory of metamorphosis. Wolf, said Goethe, had not learnt to see with 'the eyes of the spirit' 'mit den Augen des Geistes'. The older man had perceived that the leaf, in its progress up the stem, decreased in volume, but had not noticed that at the same time it ennobled itself. 'Thus he ascribed the way to perfection, contradictorily, to a stunted development.' [45] For Goethe the great 'concentration' of the life-force which led to the formation of the calyx was clearly not a matter of stunted growth but a

GOETHE'S URPFLANZE


Boehme's 'Qualities'
Stages of the Plant
7 'Seed.' The sum of all previous Qualities.
6 'Intelligible Sound.'
5 Union of opposites. Bride and Bridegroom.
Heavenly Ternary
4 The Wheel stands still. Transitional phase.
3 'Kreuzrad.' The two opposites clash and revolve.
2 Will creates its own opposite. Duality and extension appear. Expansion.
Earthly Ternary
1 Uncreated Will. 'Seed.' Contraction.
7 Seed. Contraction.
6 Fruit. Expansion.
5 Sexual Organs. Contraction.
4 Corolla. Expansion.
3 Calyx. Contraction.
(Stem contracts towards calyx)
2 Stem. Expansion.
(Cotyledons. Duality appears.)
1 Seed. Contraction.
Roots not included in Goethe's scheme.

This diagram is intended solely as a basis for comparison between Boehme's 'Qualities of God' and the stages of development of the Urpflanze. It is not intended to suggest any particular plant that Goethe may have had in mind.

Fig. 1

necessary preliminary of greater perfection. It was contradictory to describe it as Wolf had done, because 'death' was essential to 'rebirth', and only by this means could the summit of Nature be achieved. Thus the calyx, as Goethe describes it, has almost all the qualities of the alchemical centre and wheel. It is the third stage, following, as in the schemes of Boehme and Welling, the initial point or seed, and the subsequent expansion. It is a wheel, and a collection of radii spreading from a centre. Through it the plant 'reaches its end by means of opposed forces'. In it the leaves lose their individual identity and become members of one whole, and by passing through it they become ennobled. It scarcely seems possible to regard such a wealth of coincidences as purely fortuitous.[1]

The fourth stage presents more difficulty than the third. In Boehme's scheme the fourth Quality was a transitional stage, variously represented as a stroke of lightning, a moment of extreme terror, and the cessation of the wheel's movement. There is nothing to suggest these symbols in any way in the *Metamorphosis* essay. There, the fourth stage is reached with the petals of the corolla, and Goethe's attitude is chiefly one of admiration for the beauty now revealed in the flower. His notebooks reveal nothing more. Late in life, however, he did copy out at some length an extract from a botanical article written by his friend and admirer Martius for the scientific periodical *Isis*. [46] He also wrote a short introductory passage, apparently meaning to include the extract in his published work, and

[1] A very interesting parallel is offered in the recent novel of Ernst Jünger, *Auf den Marmorklippen* (Zürich, no date), so close as to suggest that it was perhaps inspired by Goethe's imaginative hypothesis. The story concerns two botanists, who at one point are occupied with 'der Art . . . in der die Pflanzen den Kreis aufteilen, mit der *Axen-stellung*, die den organischen Figuren zugrunde liegt'. (p. 65). They later meet a priest who knows the nature of their study and shows them, with the air of making a great revelation, a simple plantain. As they bend to observe it—'erschien es uns, als ob sie ungewöhnlich gross und regelmässig sei; ihr Rund war als *ein grüner Kreis* gebildet, den die ovalen Blätter unterteilten, und zackig ränderten, *in deren Mitte sich leuchtend der Wachstumspunkt erhob*. Die Bildung schien zugleich so frisch und zart im Fleische, wie unzerstörbar im Geistesglanz der Symmetrie. Da fasste uns ein Schauer an; *wir fühlten, wie die Lust zum Leben und die Lust zum Sterben sich in uns einten;* und als wir uns erhoben, blickten wir in Pater Lampros' lächelndes Gesicht. Er hatte uns ein Mysterium vertraut.' (p. 70.) (My italics). Possibly some such intuitive feeling as this inspired Goethe to work out his theory in greater detail.

describing Martius as a 'masterly portrayer' of his own theory of metamorphosis. [47] In this article Martius expresses his admiration for Goethe's work, and proceeds to correlate it with the widely held contemporary theory of a spiral development in plants. In the extract copied out by Goethe, Martius is describing the arrangement of the leaves in a spiral round the stem; that is, the way in which each successive leaf appears, in some plants, higher up and slightly farther round the stem's circumference, as though it were attached to a spiral thread running down the whole length of the plant. 'These leaves', writes Martius, 'assemble towards the end of a twig or flower-stalk around a common axis, until, being united and joined to one another, they come to a standstill.' The movement is, he adds, 'not without relationship to general cosmic laws'. [48] Whether Martius is considering the calyx, or the corolla, as the point where the transformed leaves are joined together, is not clear. He is, however, evidently thinking of the spiral arrangement of the leaves as a rotatory movement, and when the stage of union and mutual attachment is reached, he regards the leaves as 'coming to a standstill'. The appeal which such a passage would hold for Goethe, supposing him to have had alchemical and mystical analogies in mind, is obvious. In this cessation of movement was further confirmation of his view of the calyx, and perhaps also of the corolla, as symbolical wheels. Thus, although it is not possible to draw any exact parallel between the fourth stage in the Urpflanze and the fourth of Boehme's Qualities, one of the chief features in the latter, the peace of complete stillness, is not wholly absent from Goethe's mind.

With the fifth stage, the analogy again becomes close. In Boehme, the fifth Quality represents the union of man and God, symbolized, as with the alchemists, in the marriage of male and female. In the Urpflanze, which was a hermaphrodite plant, it is the fructification of the ovary by the pollen. It is increasingly difficult to describe such coincidences as this as accidental. Moreover, in speaking of this union of the sexes, Goethe again employs a phrase capable of a double interpretation. He notes that the saps are constantly in contact with one another during their progress up the stem, thanks to the intricate system of cross-channels with which they are provided. This contact

appears to end when the sexual organs appear. But he is inclined to think that the saps have now become so refined as to assume the form of pollen, and that as the male part sends its effluence (seine Einflüsse) streaming across to the female, the system of cross-channels is continued in a different form. This form he calls a 'spiritual anastomosis' (eine geistige Anastomose). [49] Recalling his double use of the word 'geistig' in a passage already quoted, where it meant both 'spiritual' and 'rarefied', it seems probable that he had in mind here something like the spiritual marriage of Boehme's system. Again Goethe's notebooks are of assistance, although they do not provide conclusive evidence. He seems at one time to have been interested in the question whether a plant could truly be said to have a single organ of each sex. He puts the question to himself in the form 'how far a true *monandria monogynia* can be said to exist'. [50] The distinction implied is that many plants either have numerous reproductive organs of both sexes, or have a great preponderence of one sex over the other; the *monandria monogynia* would have one of each, and as Goethe noted, a few plants do show this arrangement. [51] It is, then, conceivable that he was looking for a plant which should represent the symbolical union of male and female in its purest form. The harem-like arrangement in which one female was surrounded by many males would not do. In Boehme's language, 'there the Bridegroom kisses his bride': only the pure union of one and one would fully suit Goethe's purpose. This is however admittedly conjecture; the simple analogy of the marriage of male and female is sufficient to maintain the thread of these parallels.

The sixth stage affords no confirmation at all. As has already appeared, there is the greatest difficulty in construing the meaning of Boehme's sixth Quality, and it seems to bear no relationship to alchemical symbolism. The most that can be said is that, just as there is an expanding stage intervening between the fifth and seventh Qualities, so also in the Urpflanze there is an expanding stage, the fruit, between the reproductive organs and the seed.

With the seventh stage, however, the analogy is again obvious. Boehme's seventh Quality is actually described as a seed, representing a final cause or entelechy, and is closely linked with the

first Quality. Similarly the seed of the plant, once fully formed, begins the cycle of reproduction afresh. The process of becoming is repeated once more. 'From generation and birth to generation and birth', in Goethe's words, 'Nature completes the cycle of a plant's life.' [52] The seed, as he wrote in the *Metamorphosis* essay, is at 'the highest degree of contraction and development of its inward self'. [53] It is, so to speak, a tincture, a highly concentrated force, in which those 'inward' forces, liberated in the purified pollen, have now entered their most refined state.

By ignoring Goethe's definite statement that there are six stages in the life of the plant, and including what he omitted, the original seed, it has been possible to establish a very close parallel with mystical doctrines. But the procedure perhaps needs some justification. Firstly, it is clear that, if Goethe had this parallel in mind, he was careful to publish only the barest hints. The passages which most reveal his thoughts are found almost entirely in his private notes or in later publications. In view of this secrecy, and his obvious desire to have his work examined by the normal standards of scientific criticism, it would have been foolish to introduce the mystic number seven. This was easily avoided by leaving the initial seed out of account. The fact remains that there are seven stages in Goethe's description, although, as in the mystical system, the first and last can be regarded as identical. Turning to the preparatory notes, there are again clear indications of the direction in which Goethe's thoughts were moving. In the *Vorarbeiten zur Morphologie*, already quoted, it has been seen how he attempted to fit the development of the plant into a series of contractions and expansions. At that time, he tended to think that the male and female reproductive organs each represented one of these opposed tendencies, whereas in the final version they are combined in a single contracting stage. The note-book shows however that at this earlier period he was regarding the reproductive organs as the two final stages in a series of seven. The way in which he then proposed to divide up the plant's development was as follows:[1]

[1] *WA.* II. 13. 134. The list is arranged across the page, as shown, with various sub-headings, such as buds, gemmae, roots, etc., which do not however affect the order of the main headings:

Samen. Federchen. Blat. Kelch. Krone. Staubfäden. Pistill.

Seed. Plumule. Leaf. Calyx. Corolla. Filaments. Pistil.
(of stamen)

Here the seed is placed at the beginning, and the end is reached with the stamens and pistils. This arrangement however does not appear to have met Goethe's requirements, since he makes another attempt with the following scheme, again representing seven stages:[1]

Cotyledons. Leaves. Calyx. Corolla. Anthers. Style and Stigma. Seed.

This time the seed has been shifted from the first to the last position, indicating that it could equally well occupy either, although the reproductive organs are still regarded as two separate stages. But in each of these two schemes the number of stages is seven, and it is a simple step from the second of them to the final arrangement as it was to appear in the *Metamorphosis* essay:

	First Version	*Second Version*	*Final Version*
1.	Seed	Cotyledons	Seed
2.	Plumule	Leaf	Leaf
3.	Leaf	Calyx	Calyx
4.	Calyx	Corolla	Corolla
5.	Corolla	Male	Male and Female
6.	Male	Female	Fruit
7.	Female	Seed	Seed

It appears from this comparison that Goethe at first intended to equate the male and female with the active and passive tendencies, as in the alchemical systems. In doing so however he was omitting the stage of the fruit, and in order to introduce this, while still keeping to the number seven, he was obliged to combine the male and female in one. At the same time he seems to have come to the conclusion that the plumule—the first young

[1] *WA.* II. 13. 125. '1. Region der Cotiledone
2. ———— Foliorum
3. ———— Calycis
4. ———— Petalorum
5. ———— Antherarum
6. ———— Styli et Stigmatis
7. ———— Seminis.'

It is not possible to date these two attempts, although they are clearly prior to the version in the *Metamorphosis* essay. I arrange them in this order since the second is closer to the final version.

shoot within the seed—and the cotyledons, were not so important as he had at first thought. The emergence of the plant from the seed could equally well be represented by the stem-leaves. Once again, he is forced to reject these two features in order to adhere to the number seven. Finally, it must have occurred to him that the seed could be either the beginning or the end, and he accordingly inserts it in both positions. Since the whole process was cyclical, and the last stage began again as the first, it was possible now to speak of only six stages in the plant's development.

This gradual approximation certainly makes it unlikely that Goethe had anything so rigid as a comparison with Boehme's system in mind from the outset. It seems more probable that he began by merely looking for a scheme which would express the idea of alternating expansion and contraction, although the need for seven stages seems to have been present at an early date. In spite of his enthusiastic outburst in June 1786, it was not until 1788, as he says, that the idea of metamorphosis became fully clear to him. [54] During the intervening period he was presumably considering various possible systems which would express the fundamental idea of ennoblement through renunciation, and at the same time bear as close a relationship as possible to reality. The fact that his final scheme bore a close resemblance to that of Boehme does not mean that he was consciously thinking of Boehme at the time. It might well have been derived solely from his alchemical studies. But it is easy to see now the reason for his great enthusiasm, as the full possibilities of the idea began to dawn on his mind.

The Urpflanze represents one further mystical symbol, the resolution of duality in unity, which has been seen to form an important part of alchemistic lore. It is already apparent that in describing his typical plant, Goethe was obliged to disregard many varieties of vegetable life as divergences from the norm. Trees, cereals, grasses and mosses, for example, will scarcely fit into his scheme, and as he himself admitted, there are wide variations even among plants which do broadly correspond to it. A modern critic writes: 'The artistic economy of his exposition was achieved at the expense of deliberate and ruthless exclusions, which to some extent reduce the significance of the work.' [55]

One of the most serious of these exclusions was that of the whole classes of monocotyledons and acotyledons, that is, those plants having only one seed-leaf or none at all. Goethe restricts himself to the dicotyledons, and from his point of view he had good reason for doing so. 'The cotyledons', he says, 'are generally twinned', [56] and mentions as an example the bean-plant, *Vicia Faba*. That is, the first shoot of the plant carries with it as it emerges from the soil the two halves of its seed-coverings, the cotyledons, which appear on either side of the stem like small mis-shapen leaves. From this, Goethe goes on to make a remark which, he says, will subsequently appear 'even more important': 'The leaves of this first node are often still *paired* when the succeeding leaves of the stem stand alternately; there is here an approach and association of parts which Nature, later in the sequence, disjoins and separates from one another.' [57] Thus the plant, while it is still almost in the seed-stage, and before the stem has taken any definite shape, represents a unity which is later disrupted by Nature. The cotyledons are 'still' paired ('auch dann gepaart'), that is, the initial unity of the seed, in which the cotyledons are packed close together, has not yet been disturbed in spite of the slight development which has taken place. Later, the developing leaves are separated and held apart from one another. Later still, however, they are joined together once more, and this is presumably the point which Goethe had in mind when he said that the initial separation was of some importance. The reunion takes place at the stage where, from the analogy with Boehme's Qualities, one would expect to find it: in the reproductive organs. The parts of the male organ, says Goethe, offer 'the most wonderful examples of the union of plant-members which to begin with were truly separated'. [58] The leaves have now become transformed into filaments and anthers, which are concrescent organs, and thus demonstrate the coming together of the separated members. But as Goethe remarks, he has already alluded to this phenomenon several times in the essay. This is particularly the case in his description of the calyx, which he describes as a joining together of leaves. [59] It now becomes clear why Goethe excluded from his typical plant all but the dicotyledons. These alone could provide him with the example of an initial unity in duality, such as appears

in the mystical writings he had studied. In the beginning man was believed to have been one and whole; his present condition was one of duality, and, in Plato's words 'this meeting, this becoming one instead of two, is the very expression of his ancient need'. In the same way the seed of the Urpflanze was one, and yet contained a duality, a duality which emerged very shortly after the plant commenced its growth, as also it emerged in Boehme's system as soon as the world of appearances came into being. The function of the plant in its normal development was to restore this lost unity, and for that reason the Urpflanze was necessarily a hermaphrodite (although again many plants do not fit into this category). These two features of the Urpflanze, the two cotyledons and the male and female organs on one stem, were therefore retained by Goethe, to the exclusion of many other possibilities, because they alone could symbolize the philosophy he wished to express.

In later years this philosophy took on a more decisive shape, and Goethe was able to express it in a general formula. 'To divide what is united', he wrote in his *Theory of Colours*, 'and to unite what is divided, is the very life of Nature; this is the eternal systole and diastole, the eternal syncresis and diacresis, the rhythmical breathing of the world, in which we live, move, and have our being.' [60] It is best known in the form which Goethe gave it in the poem *Wiederfinden*. Here the world is seen lying wrapped in the bosom of God, as yet unrealized, passive, and unformed, until the divine fiat tears it from its slumbers, and the All, shrieking in its birth-pangs, divides into the separate phenomena:

> Als die Welt im tiefsten Grunde
> Lag an Gottes ewger Brust,
> Ordnet' er die erste Stunde
> Mit erhabner Schöpfungslust,
> Und er sprach das Wort: Es werde!
> Da erklang ein schmerzlich Ach!
> Als das All mit Machtgebärde
> In die Wirklichkeiten brach.

Light and darkness stand opposed, the elements flee asunder, all is distinct and isolated. God himself is now alone, until he creates for himself Aurora, the dawn. Under the influence of

the embrace which God now bestows upon his daughter, all things draw together once more in loving union:

> Und mit eiligem Bestreben
> Sucht sich was sich angehört,
> Und zu ungemessnem Leben
> Ist Gefühl und Blick gekehrt.
> Seis Ergreifen, sei es Raffen,
> Wenn es nur sich fasst und hält!
> Allah braucht nicht mehr zu schaffen,
> Wir erschaffen seine Welt.

Here again is the Platonic myth of the lost union of male and female, and the interpretation of Love as the 'desire and pursuit of the whole'. This, then, is the importance which Goethe attaches to the 'separation' of the leaves and their reunion at some higher stage of the plant's development.

But there are symbolized in the Urpflanze two possibilities of such reunion. These were expressed later by Goethe in the form of a general law:

> Anything that enters the world of phenomena must divide, in order to appear at all. The separated parts seek one another again, and may find each other and be reunited: in the lower sense, by each mixing with its opposite, that is, by simply coming together with it, in which case the phenomenon becomes nullified or at least indifferent. But the union can also occur in the higher sense, whereby the separated parts are first developed and heightened, so that the combination of the two developed sides produces a third, higher being, of a new and unexpected kind. [61]

There is thus on the one hand a union brought about by the development of the two separated opposites, and on the other one which results merely from their mixture, without either having developed in any way. The former, which is a union 'in the higher sense', has already been illustrated. The plant, in order to appear at all, has to divide: the leaves are therefore separated on the stem. But before they can be reunited in their transformed state, either as sepals or as reproductive organs, they are purified and perfected, that is, they undergo a process of development. Their union, symbolizing that between God and man, is thus a union in the higher sense. So Goethe described it also in the poem *Selige Sehnsucht*, in which he

speaks of the soul's yearning for death in the divine embrace. Lying awake at night in the marriage bed, it perceives the burning candle close by, and flutters mothlike about the destructive flame until the desire for immolation overwhelms it:

> Nicht mehr bleibest du umfangen
> In der Finsternis Beschattung,
> Und dich reisset neu Verlangen
> Auf zu höherer Begattung. [62]

This higher union alone makes earthly life tolerable, but it can only be achieved by complete renunciation, by dying in the flame:

> Und so lang du das nicht hast,
> Dieses: Stirb und werde!
> Bist du nur ein trüber Gast
> Auf der dunklen Erde. [63]

The plant in which this higher union is attained is that in which the leaves have passed through the stage of transformation represented by the calyx, that 'circulation' which was for the alchemists a symbolical death. Only after this ennobling purification does it reach the 'summit of Nature', in which the two opposites are combined. 'Through this progressive transformation of the parts the two sexes are at last produced, and these then visibly and tangibly perform, in a rapid and forcible manner, that which the plant could, by the other way, bring about only slowly, and, be it noted, *imperfectly*.' [64] Reproduction by the two sexes is thus more perfect, as Goethe himself emphasizes, than some other form of reproduction, as yet unnamed.

This other form is that generally known as 'vegetative growth'. In this, the leaves are not fully transformed, but retain what Goethe calls 'their earlier and lower vegetativeness'. [65] Goethe is at some pains in the *Metamorphosis* essay to point out that the plant can be reproduced not only by the seed, but also by the grafting or planting of buds. He concludes a long passage of demonstration with the remark: 'We may venture to infer that the seeds—which are distinguished from the buds by their enclosed condition, and from the gemmae by the visible cause of their formation and development—are nevertheless closely related to both.' [66] Both buds and seeds are capable of prolonging the life of the plant into another generation. But the

buds clearly do not undergo the same degree of purification and perfection as do the leaves which are transformed into the calyx. They appear, in close conjunction with leaves, at points on the stem where the 'saps', in Goethe's theory, are as yet still in an unrefined state. Vegetative growth occurs, he says, 'when crude saps flood the plant'. Sexual reproduction, on the other hand, results when 'more spiritual or rarefied forces predominate'.[1] As has been seen, the crude saps were for Goethe the equivalent of the alchemists' 'elements', which were also purified in the process of the work, and which represented amongst other things the elemental passions. While these are in control, the final, higher union cannot take place. Only after the transformation in the calyx, with its symbolical death, can the purified leaves attain this goal. Once the calyx has been formed, the buds can no longer appear. 'It will be seen', says Goethe, 'that in this case (of flowering, as distinct from vegetation) no buds develop, indeed the very possibility of such a development is completely removed.' [67] The more spiritual forces predominate and render the higher union possible, the lower impossible.

Further differences between the two forms of reproduction emphasize their symbolical content. Thus the higher form is said to distinguish itself from the lower by the fact that it is simultaneous, whereas the other is successive. [68] Botanically, this refers to the momentary 'union' of the two sexes in the flower during pollenization. Mystically, it is the instantaneous contact of spirit with Spirit, the flash of intersection of the timeless with time. The lower union is bound to time, to temporality, and hence proceeds by a series of successive steps. In the same way, Goethe goes as near as he can to suggesting that the higher union is also beyond or outside space. 'A plant which vegetates', he says, 'spreads itself more or less . . . its

[1] Goethe's words are: 'Jenes (vegetative growth) geschieht, wenn rohere Säfte der Pflanze in einem grösseren Masse zudringen, dieses (sexual reproduction), wenn die geistigeren Kräfte in derselben überwiegen.' (para. 113.)

His use of the word 'geistig', which Dr Arber translates as 'rarefied', is typical of Goethe's double-language. The normal meaning is 'spiritual', and this interpretation clearly fits the present context. In order to interpret the phrase in a botanical context, however, the word 'rarefied' is more appropriate. Compare Goethe's use of the word on p. 77 above, where although it clearly refers to the rarefied pollen, it is used in conjunction with such words as 'higher and better', in opposition to 'the material' and 'the baser'.

leaves spread out from the stem on all sides. On the other hand, a plant which flowers has contracted all its parts; increase in height and breadth is, as it were, arrested; and all its organs are in a highly concentrated state, and developed in close proximity to one another.' [69] The reason for this contrast is evident. The lower form of union demands by its very nature space in which to expand and time in which to develop. The higher union demands neither time nor space; it is, at least in the symbolical sense, beyond both, just as the ideal hub of the wheel is beyond movement. There can be little doubt then that in drawing this distinction Goethe had in mind something akin to the distinction which William Blake drew, between 'this Vegetable Universe' and the 'real and eternal world'. The living and informing spirit is for Blake the reality, the 'corporeal' or 'vegetative' form, the passing shadow. (It should be noted, however, that Goethe does not deny reality to the lower form; he is simply concerned to distinguish between two grades of existence.) In the same way, there is perhaps also a link with Boehme and the alchemists, from whom of course Blake derived many of his beliefs. That part of the plant which in Goethe's view is concerned with the lower union, remains as it were within the earthly ternary; at all events it does not proceed beyond it. The 'higher' union takes place within that part of Boehme's scheme designated the heavenly ternary. The question whether this was in fact Goethe's intention must however be left open for the moment. It will appear the more probable after the symbolism of his Colour-Theory has been described. What can be said with reasonable certainty is that the Urpflanze contains these two potential developments: it may proceed by 'progressive' metamorphosis to the summit of nature, or it may turn off before its development is complete and rest content with an uninspired continuance of existence.

Goethe's description of his discovery as a manifestation of God, a 'One and All', and his enthusiasm for it, are now more intelligible. Like Boehme's scheme of development, which was equally fully represented in man as it was in God, the Urpflanze was a miniature reproduction of the macrocosm. At the basis of all was the leaf, which through all its transformations remained ever the same, whether it assumed the shape of the petals or the

stem-leaves or the seed. More accurately, it is inadequate to speak of 'the leaf': the word is simply a convenient means of defining the undefinable. 'For,' in Goethe's words, 'we can just as well say that a stamen is a contracted petal, as we can say of a petal that it is a stamen in a state of expansion.' [70] The phenomena must be related to one another 'in both directions', [71] that is, each must be seen as arising from and giving rise to another. The leaf, then, is that which is transformed, the ever-present substratum of Being, presenting itself now in this shape, now in that.

> In tausend Formen magst du dich verstecken,
> Doch, Allerliebste, gleich erkenn ich dich;
> Du magst mit Zauberschleiern dich bedecken,
> Allgegenwärtge, gleich erkenn ich dich. [72]

Or again:

> Ewig wird er euch sein der Eine, der sich in Viele
> Teilt, und Einer jedoch, ewig der Einzige bleibt.
> Findet in Einem die Vielen, empfindet die Vielen wie Einen;
> Und ihr habt den Beginn, habet das Ende der Kunst. [73]

But the shapes themselves, stamen, petals, seed or fruit, are all 'leaf', all Being, as Boehme's Qualities are all God. The leaf, or whatever name we choose to give it, comprises beginning, middle and end.

At the same time however the whole, though always present, is constantly becoming. Its very being consists in becoming something else. From the seed, which contains the whole development in embryo, emerges first the stem, with its paired leaves and their implied duality. Thence arises the highly contracted form of the sepals in the calyx, in which the leaves, as it were, renounce their individuality and become members of one whole. The spiral or rotatory movement ceases, and the way is made open for the union of the two opposites, which in turn prepare the seed, in which once again the whole development of the plant is concentrated. Thus the plant repeats over and again the pattern of unity, duality, 'death', and restored unity. If these abstractions are now isolated from their particular application to the plant, and given a much wider reference, they are seen to be not far removed from the cosmology of Goethe's

youth. There the world was first a unity, which became a duality with the creation of Lucifer. The intolerable situation of Man held in the tension of the two opposites, the 'twin souls' of Faust, could only be redeemed by the intervention of God in human form. This redemption was 'not only eternally necessary, but must be constantly renewed throughout the whole time of being and becoming'.[1] The lost unity was thus restored again through the act of self-sacrifice, an act to be repeated over and again until the universe ceased to be. In this sense, the Urpflanze repeated on a microcosmic scale the essence of the whole natural scheme of things, as Goethe perceived it. The pattern of development was the same throughout the universe, down to the smallest, or very nearly the smallest unit. Possibly also Goethe felt it to be present in his own life, since he too was one being within the whole. When, in old age, he came to edit his scientific works, he declared that it had always been his intention, in his botanical works as in others, to express his own way of looking at Nature, 'but at the same time, in a way, to reveal my inward self, my mode of being'. [74] On another occasion he wrote: 'My whole inward working proved to be a heuristic process, which, recognizing a yet unknown, but conjectured law, attempts to find the same in the external world, and to introduce it there.' [75] This law was surely that manifested in the Urpflanze. Goethe's method appears to have been firstly a careful observation of his own mode of being, then an equally careful attempt at reading the same law of development into the life of the plant. Human life and plant life thus bore a close resemblance to one another, and each in turn mirrored the pattern of the universe as a whole. The precise manner in which Goethe conceived of human life according to this general law must however be left over to a later chapter.

The problem of the validity of Goethe's theory is a vexing one. From the scientific point of view, there is no question: whatever merit individual parts may have, the theory as a whole is untenable. The scientific method admits of no such analogies as these, in fact it denies the possibility of their existence. When Goethe speaks of the leaves 'losing themseives' in the calyx he is in his own words, 'introducing into the world of external Nature'

[1] See p. 52.

a concept which has reference only to the human soul. To imagine the leaf voluntarily giving up its individuality is as Romantic and unscientific as to believe with Wordsworth that every flower enjoys the air it breathes. Such a belief can rest only on an intuitive apprehension of the oneness of Nature, for which there can be no scientific proof. But Goethe was well aware of this: he was not attempting to write science in the modern sense of the word. The scientific method was only of value to him for the emphasis which it laid on facts and objectivity. He was strongly opposed to the complete subjectivity of such Nature-philosophers as Schelling, concerning whom he wrote: 'What use is an idea to me, which obliges me to cut down my stock of facts?' [76] He always believed that his own method of observation was strictly objective, that is, that it did not read into Nature ideas for which there was no basis in reality. This seems like self-deception, when one considers the way in which he repeatedly attempted to fit the life of the plant into a pre-conceived scheme of seven stages, or how he ruthlessly excluded whole classes of plants in order to arrive at the concept of the Urpflanze. It is perhaps better understood when one considers the kind of theories which had been propounded before by anagogical writers. Boehme had tried to explain the life of the plant in terms of the three principles, Salt, Sulphur and Mercury. The stem arose, he maintained, through the struggle of Mercury to escape from the other two principles, and the nodes on the stem marked the points at which it had been overtaken by them and forced to give battle. [77] This bears no relationship to reality whatsoever. Swedenborg comes closer to the scientific ideal, but his descriptions too are for the most part vague and general. The German nature-philosophers and Romantics, among whom belief in occultism was rampant, permitted themselves scientific theories of the widest possible variety, none of which had any apparent basis in fact. Goethe, however, is most precise and detailed. He omits a great deal, it is true, and this seriously damages, if it does not destroy, his claim to objectivity. But within his limited field, and granted the validity of the symbols he employs, his analogies are apposite and exact. The Urpflanze may not serve as a model for all plant life, but it is sufficiently close to the common notion of a plant to

carry a certain amount of conviction. Unlike the crude and monstrous 'typical plant' envisaged by Turpin, in which all possible forms of roots, leaves, flowers, fruits, tendrils, and buds are combined in one, [78] it does resemble what most laymen think of as a plant, and Goethe's enthusiasm for it is understandable, if not acceptable. Similarly, his description of the leaves 'losing themselves' in the calyx, and 'grouping themselves around a centre', is not wholly without basis in reality. The sepals are in fact arranged in this manner, and are often so joined to one another as to lose all trace of separateness. If such analogies are possible at all—and from any rational standpoint they are not—Goethe has made them in an astoundingly complete and detailed manner. But the theory is not, to repeat, scientific.

The criticisms of biologists may help to define the borderland in which Goethe's work stands. Some, like the renowned historian of biology, Julius von Sachs, perceiving the mystical background of his ideas, have rejected it out of hand. [79] A more recent historian writes of the *Metamorphosis* essay: 'It is romantic philosophy from beginning to end; it bears no resemblance whatever to modern natural research.' [80] This, as has been seen, is for the most part true. On the other hand, some historians have been more lenient. An American biologist, while rightly considering it unprofitable, from his point of view, to attempt to clarify Goethe's 'confused and at times contradictory views', can yet say that 'the subject of developmental morphology received its greatest impetus from . . . the Poet-Philosopher Goethe'. [81] This could not be said of a man whose work was purely subjective. Boehme, Swedenborg and Schelling could never influence the course of science in this way. Again, a recent English historian ascribes to Goethe 'three biological doctrines of great importance', which he enumerates, as well as some further 'important biological ideas'. [82] Comparing him to the fantastic extreme of the Nature-philosopher Oken, the same writer continues: 'If Goethe succeeded it is because he was a man of genius, and was more interested in Nature than in his own method.' [83] The most recent botanical comment is perhaps the most enlightening. Goethe's thought, writes Dr Arber, 'reached out to the reconciliation of the antithesis between the senses and

the intellect, an antithesis with which traditional science does not attempt to cope. It has been suggested by a literary critic that Goethe was "a great poet who *grew out* of poetry". Approaching him, as we have done here, through the medium of his plant studies, we may perhaps offer the comparable conclusion that Goethe was a great biologist, who, in the long run, overstepped the bounds of science.' [84][1] In quoting these more favourable opinions I do not mean to suggest that their authors would have subscribed in any way to the symbolical aspect of Goethe's work. But viewing it entirely from a scientific standpoint they have recognized it as in some ways a serious contribution to science. It is, on the whole, objective enough for that. Looking at it entirely from my own standpoint, I should feel inclined to call it rather a work of art, the imaginative hypothesis of a man who was first and foremost a poet. Seen in this light, it becomes a cunning and intricate pattern of metaphor and simile, elaborated down to the smallest detail, the work of a mind imbued with Eastern lore and attempting to combine it with Western methods. It is a poet's attempt at answering the scientist's challenge, to afford proof of his contention that there are tongues in trees and sermons in stones.

But it will not do to seek refuge for Goethe by the device of calling his theory not science but art. Ultimately, the criteria of both must be the same: scrupulous fidelity to perceived facts, whether subjective or objective. The artist who falsifies or elaborates his subjective perceptions is as guilty as the scientist who rigs his objective data. It is easier to demonstrate dishonesty in the scientist because his facts are more easily accessible —we cannot as a rule discover the precise nature of the artist's original perception and therefore our judgment of his achievement is intuitive and less susceptible of proof. Goethe, by demonstrating scientifically the nature of his vision, lays himself open to criticism as few poets would dare to do. He allows us both to see the original perception and to trace its subsequent elaboration and falsification. He asks for no suspension of disbelief. Thus, while we may admire the *Metamorphosis* essay so long as we regard it as a work of art, we are obliged to

[1] Goethe's work receives further sympathetic treatment in Dr Arber's *The Natural Philosophy of Plant-Form*, Cambridge, 1951.

recognize, as soon as we recall that it is also meant as science, that it achieves perfection in neither field. Because it is not acceptable as science, because it leaves so much out of account, it is, by the highest standards, inadequate also as a work of art. It reveals a minimum of that 'leap from the possible to the real' which Goethe condemned so strongly in the alchemists, but there is still a sufficiently wide hiatus to prevent the complete fusion which he intended to show. For all that, it was an amazing and a greatly conceived attempt at bridging the gap between the two spheres of human endeavour.

CHAPTER V

THE THEORY OF COLOURS

A YEAR after the appearance of the *Metamorphosis* essay Goethe published his first work in the field of chromatics. This was the *Contributions to Optics, no.* 1. [1] It was followed in 1792 by a second work on the same lines, but in neither case did Goethe make any impression on the learned public, which regarded the intervention of a poet in so technical a field as out of place, and was in any case not convinced by his anti-Newtonian arguments. Goethe was not daunted however by the criticisms encountered from friend and foe alike, but continued to develop his theory for almost twenty years. In 1810, when he felt that his ideas could be experimentally demonstrated as clearly as they were ever likely to be, he published what was to remain the classic exposition of his theory, in the volume entitled *Zur Farbenlehre. Didaktischer Theil.* Since this resumes all that was said in the earlier *Contributions*, and was only amplified, not altered, by his subsequent publications, an account of its theories will cover almost all the ground required.

The way in which Goethe came to be interested in colour-theories at all deserves however some preliminary attention. Even in his student days at Strasbourg they appear to have had some attraction for him, sufficient at all events for him to note down the title of a fairly specialized work. This was Béguelin's 'Mémoire sur les ombres colorées,' [2] a topic which Goethe was to treat extensively in his later work. [3] Whether this early interest was already at that time linked with Goethe's alchemical studies, it is impossible to say. Alchemy was, as has been seen, very much concerned with colours, which were said to mark stages in the development of the great work. Fräulein von Klettenberg was, it appears, especially interested in them, for Lavater writes of her—'she has an incomparable insight into chemistry, the nature of colours, etc.' [4] She may well have inspired Goethe's interest in the subject. There is, moreover, in his Strasbourg note-book,

an entry which might suggest that there was some connection in his mind between the two fields of study. It refers to a commentary of Pliny's Letters, and reads: 'Acutum in coloribus dicitur τὸ λαμπρὸν; Pressum τὸ σχοτεινὸν.' [5] Since most of Goethe's theory was to be built up on the contrast between Light and Darkness, a contrast which has been seen to play an important part in alchemy, it is conceivable that even at this early stage he was playing with a similar distinction, between violent and sharp colours on the one hand, and dark, compressed colours on the other. His further interest in the subject certainly developed in this way, for, as he himself says, it was as an artist and connoisseur, wishing to explain to himself the difference between 'warm' and 'cold' tints, that he came to make a serious study of colour-theories. Warmth and cold were synonymous for the alchemists, as for Plato, with light and darkness. Welling writes: 'Nature admits nothing but light and shade, that is, heat and cold, which again is nothing else but dryness and moisture.' [6] These were two more representatives of the opposites listed in the *Aurea Catena*. When Goethe heard the expressions warm and cold applied to the colours used in painting, it is quite feasible therefore, with the profound knowledge he had of alchemy, that the link between these and the far more widely symbolical opposites of Light and Darkness occurred to his mind.

At all events, the possibility of an explanation based on such a theory of opposites appears to have been present in his thoughts before he came to any serious study of the subject. This is shown by the manner in which he stumbled upon his theory. According to his own account, he had borrowed a set of optical apparatus from a friend, with the intention of performing a few experiments. His motive was mostly curiosity; he certainly had no intention of devoting a great part of the remainder of his life to the study. For some time he kept the apparatus in a box, untouched, but in spite of repeated requests from the owner for its return he was determined to find time one day to examine it thoroughly. At last, when he could not in decency retain the set any longer, he decided at least to take out a prism and amuse himself with the colours which he knew it could produce. He had not, he says, touched a prism since boyhood, when the vivid

spectrum had been simply a source of enjoyment. Without any serious intent then, he held the glass before his eyes, expecting the same result as before. To his astonishment, nothing happened; the prism and the wall at which he was looking remained as blank as ever. Then it was that he noticed that colours only appeared when the prism was facing some part of the wall where there was both light and shadow, or at least a contrast of some kind. A perfectly smooth and evenly-lit surface produced no effect at all. This suggested to him at once that colours, like the world of phenomena in general, could only arise through the conjunction of Light and Darkness. Without these opposites there could be only blank colourlessness or empty space. Physicists told him in vain that this phenomenon could be explained on the Newtonian hypothesis. He set at work to develop his idea, and to devise experiments illustrating it; for some forty years or more it remained one of his chief occupations. From the suddenness with which he came to his conclusion, it seems probable that he had the possibility of such a theory in mind before he came to look through the prism. The discovery probably took place at some time shortly before 1791, and he was by then deeply interested in the parallels between mystical symbolism and scientific observation. It is likely, therefore, that the symbolism of light and darkness was uppermost in his thought, and needed only this fortuitous jolt to take concrete shape.

But in the *Contributions to Optics* of 1791 and 1792 Goethe is still as reticent about his underlying intention as he was in the slightly earlier *Metamorphosis* essay. Only in the final version of his Colour-Theory does he provide any real clues to his meaning. The main intention of the work, he says, was 'to facilitate the communication of higher views amongst the friends of Nature'. [7] Towards the end of the book, Goethe is still more definite. Here he says that the reader, considering the theory propounded, will not be unaware of 'a certain secret point of view', and that 'a spiritual meaning can be read into these two separated and mutually opposed beings'. [8] Yet more explicit is his statement that his arrangement of six primary colours can be thought of as two triangles, which together form the mystical six-pointed star. [9] Again, in the Introduction to his theory, he

quotes the words of 'an ancient mystic' (he means Plotinus), to the effect that the eye could not perceive the outward light were it not itself possessed of a corresponding inward light:

> Wär' nicht das Auge sonnenhaft
> Wie könnten wir das Licht erblicken?
> Lebt nicht in uns des Gottes eigne Kraft,
> Wie könnt uns Göttliches entzücken? [10]

Light, he says, produces in man an organ which is 'its own equal', [11] so that the inward and outward light may come to meet each other. In this there is already a suggestion of Boehme's conception of the creation of the world. God as Light (or Lucifer) creates for himself a mirror in which his own being is made manifest. Without the perceiving eye Light could not be said to exist, since there would be nothing to perceive it; or rather, the duality of seer and seen is necessary for anything to exist at all. This idea is not exclusive to Boehme, being common to most systems of mystical thought. Here it serves merely to show the extent to which Goethe was prepared to reveal his underlying intention. But while he was far less secretive in this respect than he had been in the botanical essay, the bulk of the Colour-Theory is equally empirical to all superficial appearance. 'We would do better', Goethe writes, 'not to lay ourselves open in these concluding pages to the charge of extravagant speculation, especially since, if our Colour-Theory gains favour, there will certainly be no lack, in these days, of allegorical, symbolical and mystical applications and interpretations.' [12] He was content to leave this work to others. Accordingly, experiments are described in detail, there is no mystification, and the whole work, like the *Metamorphosis* essay, aims at achieving recognition by the scientists of Goethe's age. 'Here are no arbitrary symbols or letters', he writes, thinking no doubt of Newtonian physics—'but rather we are dealing with phenomena, which must be present both to the bodily eyes and to the eyes of the spirit, so that we can unfold clearly both to ourselves and to others their origin and derivation.' [13] Clarity of expression was Goethe's most urgent desire. But at the same time his clarity was to reveal two kinds of truth, one to the bodily eyes, the other to 'the eyes of the spirit'. Or rather, these two truths were to be seen as identical. With this intention in mind, Goethe

set out 'with irony', [14] as he expressed it, to write his Colour-Theory.

He remarks in the foreword that certain opposites have always been apparent to mankind. Nature moves in a series of balances and counter-balances, which give rise to man's awareness of things in time and space. We speak of a 'here' and a 'there', 'above' and 'below', 'before' and 'after'. [15] But for this duality, Goethe implies, Nature would not exist, since neither extension nor duration would be possible. He takes this list of opposites further. They extend, he says, to such contraries as attraction and repulsion, more and less, action and reaction, progression and regression, violence and moderation. In this he is evidently drawing close to the categories listed in the *Aurea Catena*. The similarity is emphasized when he adds to the list 'activity and passivity' and 'male and female'. [16] But like the outward and the inward light, these categories might well be regarded as part of the general mystical tradition, of which alchemy was merely one section. It appears more probable however that Goethe had specifically alchemical doctrines in mind when he refers, in the same context, to acidification and deacidification. [17] Acid and alkali were at the head of the list of opposites in the *Aurea Catena*, and experiments to show how the one might be transformed into the other are a frequent feature of its pages. There is probably also some connection between them and the 'bitterness' and 'sweetness' ascribed by Boehme to his first two Qualities, symbolizing on the one hand the Wrath, on the other the Love of God. Both of these were in his view a necessary part of creation, and the *Aurea Catena* attempts to show how the two, in their chemical form, are present throughout all things. By including these also in his description, Goethe appears to have had the alchemical tradition still before him, although by this time it had certainly been incorporated in his much wider knowledge of such neo-Platonists as Giordano Bruno and Plotinus.

Having indicated the nature of this universal polarity, Goethe goes on to say that the opposites provide symbols, which can be applied in various ways to all manner of phenomena. In this particular case he intends to apply them to the realm of colours. Colours reveal to the sense of sight the whole of nature. [18]

They are the activity and passivity of light, [19] and so symbolize in themselves the whole working of the universe. They thus correspond for Goethe to the world of phenomena as a whole. Like the Urpflanze, they reveal in microcosmic form the nature of the macrocosm.

Turning now to actual demonstration, Goethe examines the effect of light and darkness on the eye. [20] Light, he notes, causes the pupil to contract, darkness causes it to expand. Similarly dark objects appear to be smaller than bright ones, and he quotes Tycho Brahe's observation that the moon in eclipse appears a fifth less in diameter than when it is shining at the full. In the same way a black disc on a white surface will appear smaller than a white disc of equal size on a black surface. This phenomenon Goethe explains as an attempt on the part of the eye to 'restore the balance'. Presented with an overwhelming preponderance of either of these opposites, it seeks to provide the counterpart from its own resources. There is in the eye as it were a desire for totality, it 'strives for a whole', [21] and attempts to embrace both the expanding and the contracting force at once. In this equation of light and darkness with expansion and contraction we are however already in the region of mystical symbolism. Darkness is thought of, as Goethe noted elsewhere, as 'the abyss and ground of being'. [22] Light is perhaps Logos.

This symbolism is continued when Goethe explains how colours arise. His first experiment with a prism had appeared to prove to him that this could only occur when both light and darkness were present. He now goes on to develop this theory. Objects seen through a prism, he observes, are coloured only at the edges. When for example the horizontal bar of a window is seen in this way, the centre of the bar remains dark, or retains its normal colour. Only along the edges, where the dark outline stands out against the light, do the colours of the spectrum appear. In the same way a card divided horizontally into a black and a white rectangle will appear coloured, when seen through the prism, only along the line of division. A perfectly blank card will not have this effect. A contrast is always necessary. [23] This is true not only of those cases where the object is seen through the prism by the observer. It is also true when

the observer stands aside and allows a ray of light to pass through the prism, so that a spectrum is cast on the wall or screen beyond. To explain this, Goethe makes use of the expression das Trübe, the opaque or semi-opaque. [24] It covers all degrees of opacity from translucency, which is 'derived from transparency', [25] up to complete opaqueness, which is white. [26] By a curious and scarcely justifiable use of words, Goethe goes so far as to say that transparency itself is the first degree of opacity. [27] Thus any object, no matter how transparent, tends to produce colours when it intervenes in the path of light. Sunlight for instance is in itself colourless, but seen through the opacity of mist the sun appears yellow. Seen through a yet denser mist it appears red. Shadows on the other hand, representing darkness, appear blue when seen in this way. Similarly the dark sea-bottom, seen by a diver through the semi-opaque medium of the water, appears purple. A piece of parchment placed over the pin-hole in a *camera obscura* will be seen from inside as yellow, when the sun is shining, but will appear blue when there is darkness outside. In all these cases colours are produced by the intervention of an opaque or semi-opaque medium. The colour produced depends entirely on the lightness or darkness of the object seen through such a medium. Thus it is that a prism (which, being transparent, has a minimum degree of opacity), when placed in the path of a ray of light, acts as an opaque agent and casts a spectrum on the screen. [28] In each of these cases, therefore, from the dark window-frame, which is completely opaque, to the prism, which is as little opaque as possible, there is a 'limitation' of the light, through which it is obliged to come into contact with a medium darker than itself. A 'limited light', [29] that is, one bounded or limited by a darker medium, is necessary in order for colours to appear. Goethe illustrates this further with the example of a polished silver plate exposed to the sunlight. So long as the surface is perfectly smooth it will simply reflect the light, and although the effect is dazzling, it will produce no colours. If however the surface is lightly scratched, the light will catch the uneven parts and, if the plate is viewed from certain angles, colours will be seen along these scratches. Even a piece of rough paper will produce the same effect, colours being seen at each raised point on the

surface. The essential conditions are firstly a strong light, and secondly a limitation of the light. [30] The limitation in these latter cases might be said to take the place of, or represent, the darkness. Just as the spectrum appears on the black and white card only at the line of division, which marks off the zones of blackness and whiteness, so also the colours in the other examples arise only where the light is limited, either by a darker medium or, as with the scratches on the silver plate, by being concentrated on a single point.

In propounding this theory, Goethe immediately found himself at loggerheads with the whole Newtonian tradition of optics. [31] According to Newton's view, as Goethe describes it, the colours of the spectrum arise through a ray of light striking the prism and being there split up into its component colours. Each colour having a different angle of refraction, the colours emerge on the far side of the prism on divergent paths, and thus form the spectrum. This view Goethe was unable to accept. He refused in the first place to acknowledge Newton's right to speak of a 'ray' of light at all. He could not imagine how an infinite whole could be subdivided into parts, and argued that every spectrum was produced by an entire image of the sun, not by an individual ray. [32] (To understand Goethe's attitude here, the symbolical implications of light must be recalled.) Secondly, he criticized the view that this so-called ray could be again split up into yet smaller components. As he saw it, Newton was suggesting that an infinitely small pencil of uncoloured light was suddenly divided, on contact with the prism, into numerous divergent pencils of colour, which, in some miraculous way, it already contained. To this he opposed the theory that the light was not itself composed of colours, but produced them only by virtue of its contact with a medium darker or less transparent than itself. The spectrum would not appear at all but for the prism, and the prism was in itself a 'limitation' of the light. This clearly brings us into depths where the layman would be unwise to enter. I believe I am right in saying that, according to the modern explanation, colours are 'contained' in light in the sense that they are vibrating at various frequencies within the frequency of light. They are 'in' light, as musical notes are 'in' a chord. This was, of course, not established in Goethe's time. But the

point which he sought to make was that colours were not visible as separate entities until the light came into contact with a darker medium. Light, he might have agreed, was potentially capable of producing colours, but it never did so until it was limited. This fundamental divergence from the traditional theory led Goethe into a derisive polemic against Newton, in which, amongst other things, he mistakenly attempted to disprove the theory of diverse refractibility. Into this polemic it is not necessary to follow him here. It is sufficient to indicate the nature of the problem which Goethe was attempting to solve. Light produced colours, so much was clear. But the manner in which it produced them was less obvious. He was not content to accept at face-value the view that colours were already present in light and it seemed to him that the theory of the limitation of light, whether by opaque or semi-opaque bodies, provided as satisfactory an answer as could be expected. Without the prism, or some other 'opaque' or 'dark' object, the phenomenon of colour would never appear. On this view the whole of his opposition to Newton and Newton's optics depended.

The difficulty which Goethe was attempting to solve was, it seems, not a negligible one. It is certain however that his preoccupation with it was due in large part to its symbolical implications. Colour represented for him, in microcosmic form, the world of phenomena as a whole. All nature, he had said, was revealed, to the visual sense, by colour. Colours were the activity and passivity of light. But this world of phenomena, in which these active and passive opposites existed, arose only through the initial opposition of expanding Light and contracting Darkness. Without this duality there could be no 'here' or 'there'. Unity, which in Goethe's scheme is Light, is smooth, undivided, and undifferentiated. Separateness and variety arise when the Light is concentrated in any way, that is, when it is obliged to manifest itself in an individual being. Boehme and the alchemists describe the creation and nature of the world in precisely these terms. Here again however these ideas are not exclusive to alchemy but are part of a wider tradition. Giordano Bruno, whose *Trattato della Causa* is quoted in Goethe's Strasbourg notebook, and whom Goethe read while writing the Colour-Theory, comments on the theory that both indeterminate

matter and the 'World-Soul' can assume any form they please, and yet in each separate case both adopt *one* form, both become *one* individual, 'so that each is the determination and limitation of the other'. [33] The Cabbalists, faced with the same theoretical difficulty, constructed a system to explain 'the contraction or limitation of the Infinite in order to make possible the emanation of the world of phenomena'.[1] All these explanations were intended to supply an intelligible account of the creation of finite, individual beings out of an infinite and undivided whole. In the same way, colours were explained by Goethe as finite and determinate entities arising from the limitation of an infinite and undetermined light.

The dual opposites do not however disappear when the colours themselves are produced, any more than they cease to exist in the created world of phenomena. Light and darkness are represented, in the range of colour, by yellow and blue. These are respectively the 'nearest' of the colours to the two fundamental opposites, [34] as Goethe attempts to show by various experiments. [35] Each also has an effect on the beholder similar to that caused by light and darkness. Yellow, which arises when white light is moderated to a very slight degree, is a gay, cheerful colour; it delights the eye and expands the heart. [36] A bright yellow will produce the same effect on the retina as bright sunlight. Blue on the other hand always carries a suggestion of darkness. Although, being a colour, it is necessarily something positive, its aesthetic effect is largely negative; it is 'an attractive nothing'. [37] It gives a feeling of coldness, emptiness, expanse. Unlike yellow, which seems to press in on the beholder, it seems to retreat from him and draw him after. [38] In all these comments on the aesthetic and moral effects of colours, Goethe is clearly developing the idea of light and darkness as expansive and contractive opposites. Yellow is positive and active; blue is negative and passive. Blue is also 'nothing', recalling the tension between existence and non-existence in Boehme's scheme, and the *Noluntas Patris* in Fludd's diagram. When Goethe adds

[1] Abelson, *Jewish Mysticism*, p. 144. Cp. Blake, 'Milton', section 14, line 20:

'The Divine Hand found the Two Limits, first of Opacity,
then of Contraction:
Opacity was named Satan, Contraction was named Adam.'

that we are glad to look at blue 'because it draws us after', [39] he invites comparison with the final line of the *Chorus mysticus*: 'Das Ewig-Weibliche zieht uns hinan.' These two colours have in his system a universal significance.

Some further indication of the nature of the opposites thus represented is given by the list which Goethe draws up at one stage in his exposition. They are:

Plus	*Minus*
Yellow	Blue
Effectiveness	Deprivation [of effectiveness?]
Light	Shadow
Bright	Dark
Power	Weakness
Warmth	Cold
Proximity	Distance
Repulsion	Attraction
Related to acids	Related to alkalis [40]

The list is again strongly reminiscent of the one given in the *Aurea Catena*.

Goethe also observes that the physical effect of yellow and blue is akin to that of light and darkness. Just as the eye, blinded by strong light, sees only darkness for some time afterwards, so too, if it stares at a bright yellow for a considerable period, it will see a colour closely related to blue, that is, violet. A blue colour stared at in the same way will cause an after-image of orange, which is related to yellow. [41] Here again the eye restores the balance. It demands the totality afforded by the combination of active and passive colours. In a similar way the colour green causes an after-image of red, and vice versa. These three groups of opposites now form the basis of Goethe's colour-cycle. Yellow, blue and red are the primaries, orange, violet and green are the secondaries. (Goethe omitted the seventh constituent of the full spectrum, indigo, from his scheme, on the grounds that it was insufficiently distinguishable from blue and violet. It is a curious fact that Newton has been accused of mysticism for introducing the number seven.) The six colours, then, are arranged in a circular pattern, which appears thus:

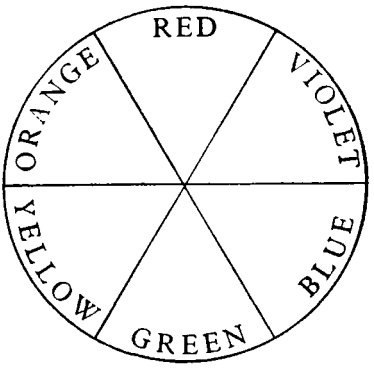


Fig. 2

In this circle the opposites are in each case complementary colours. A harmonious effect is produced by combining them, yellow with violet, orange with blue, red with green.[1] The eye, therefore, writes Goethe, in demanding the complementary colour, is 'completing in itself the whole cycle', [42] and thus establishes harmony. Here again the tendency of the eye to gather the contrasting opposites into one whole is emphasized.

Goethe's thought is so far clearly directed towards finding in his colour-theory a confirmation, or a tangible demonstration, of certain aspects of his philosophy. But while this philosophy bears a considerable resemblance to that of various mystical writers, and of alchemists, Cabbalists, and neo-Platonists, there is little to show that it owed any special debt to alchemy in particular. This appears in the section of the Colour-Theory which describes the colour red. The colour is said by Goethe to arise in various ways. It can for example be produced by increasing the opacity of the medium through which white light is made to shine. Thus a piece of parchment held in front of the pin-hole of a *camera obscura* will, as already described, cause the light to appear yellow. If however further sheets of parchment are added, thus increasing the degree of opacity, the yellow will take on a reddish tinge. As more sheets are added, this tinge will increase, until finally the colour 'passes into red'. [43] Conversely, if darkness is seen through a semi-opaque medium it will appear blue, but as the opacity decreases, the blue will become blue-red,

[1] This view is criticized by Ostwald in his *Colour-Science*, p. 16.

or violet. [44] In each case therefore a change in the opacity introduces an element of red. The validity of this demonstration appears to be doubtful, and Goethe does not go so far as to suggest that a yet further decrease will result in the blue-red becoming red, which would seem to be required by his theory.[1] He does however provide a rather more complex experiment to the same end. If a white card with a horizontal black band is observed through a prism, the spectrum will appear incomplete. On one edge of the black band will appear a strip of blue, and a strip of blue-red (violet.) On the other edge the colours will be yellow and yellow-red (orange). The centre will remain black.

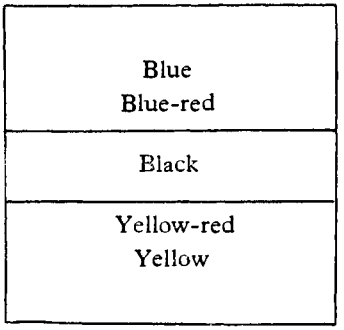


Fig. 3

If however the black band be made narrow enough, the blue-red will spread over it and reach the strip of yellow-red. These will combine and the centre of the band will be coloured red. The effect will now appear thus: [45]

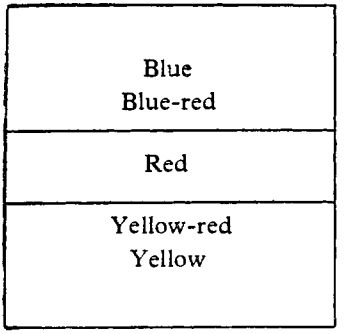


Fig. 4

[1] Schopenhauer pointed out that the violet colour thus produced was not necessarily an approach towards red. See *Ueber das Sehn und die Farben.*

This is easily verified with the apparatus supplied by Goethe.[1] But the conclusions which he draws are less justifiable. He claims that this experiment shows a potentiality in both yellow and blue to become red. They can be subjected to a process of 'intensification', [46] by which the element of red in each can be developed through yellow-red and blue-red until it is completely dominant and the yellow and blue aspects have disappeared. This 'imperceptible heightening of yellow and blue into red' is what the French refer to when they say that a colour has an *oeil de rouge*. [47] Red is the 'culmination' of this process, the 'zenith'. In it, 'neither yellow nor blue is to be found'. [48] It is the 'true mediator' between these two opposites. [49]

There is not the slightest doubt that in describing red in this way Goethe was thinking in terms of the alchemical process. There, colours played an important part. In particular, the colour red, also called purple, was most often associated with the Philosophers' Stone. Starkey writes: 'Thou shalt have a sparkling red, like unto the flaming fire. Then art thou come indeed to thy Harvest, and to the end of all thy Operations.' [50] Basil Valentine speaks in similar terms: 'If you have the purple mantle of Sol . . . then be thankful unto God for it.' [51] Paracelsus speaks of 'a deep redness', [52] and other writers use all manner of similes to express the same feature. Thus in Arnold's *History* the Stone is referred to as a ruby or carbuncle; Khunrath writes of its 'rosy-coloured blood', Welling of the 'blood-red tincture'. Goethe refers to the red of the spectrum in precisely the same terms. Throughout he speaks of it indiscriminately as either red or purple. It is 'a splendid pure red, to which we have often given the name of purple'. [53] Again, it is a 'completely pure red', which, 'in view of its high dignity we have sometimes called purple, although the purple of the ancients tended more towards blue'. [54] It is ruby-red, [55] and rosy-coloured, [56] the 'most perfect red'. [57] All these appellations make it difficult to decide, from a scientific point of view, precisely what colour Goethe had in mind,[2] and render it more likely that he was

[1] However, the central colour is not, according to the physicist Ostwald, produced by the 'spreading over' of the two bands, which in fact only approach each other very closely, so as almost to touch. See W. Ostwald *Goethe, Schopenhauer und die Farbenlehre*, p. 45.

[2] See, however, the attempt at a definition by R. Matthaei, *Euphorion*, 34. Bd.

thinking of alchemical symbols. This interpretation gains weight when Goethe speaks of the effect of the colour on the feelings of the beholder. 'In the union of the heightened polar opposites', he says, 'it is imaginable that an actual quietening (of the sensations) takes place, a feeling which we should like to call an ideal satisfaction.' [58] This recalls Croll's 'quiet of the sences', and the delight which the alchemist expected from the possession of the Stone. Again, just as the Stone, regarded as the macrocosm, was the symbol not only of the end of the operation but also of the end of all things, so Goethe writes that on the Day of Judgment heaven and earth must appear veiled in fearful purple: 'A purple-coloured glass reveals a well-lit landscape in a terrible light. So, one imagines, must the hue be spread over earth and sky on the Day of Judgment.' [59] On the other hand, it is a source of delight—'die herrlichste Purpur-Wonne'. [60] There is both joy and terror in this symbol of divine Love and Wrath. Finally, the colour red is said to contain, 'partly "actu", partly "potentia",' all other colours. [61] Goethe provides no evidence for this statement, saying merely that it will be obvious to anyone who has followed his argument. One is inclined to suppose therefore that he can have been thinking only of the symbolical aspect of the colour. Red, like the Stone, was not only a quintessence, in which the opposites were no longer perceptible, but also an entelechy containing the germs of all past and future development.

Red is the symbol of that union of sexes already encountered in the *Metamorphosis* essay, as well as the quintessential seed. It represents 'the coming together of two opposed ends which have gradually prepared themselves for union'. [62] Active and passive colours are developed or heightened (gesteigert), until the purest and highest colour appears, combining both, yet being in itself neither one nor the other. Moreover, the process by which it is said to arise is identical in symbolism with that of the *Metamorphosis* and of the *Magnum Opus*. It is described by Goethe as an 'intensification' of the initially opposed colours. Alchemy, to quote an adept of the nineteenth century, was 'the philosophic and exact science of the regeneration of the human soul from its present sense-immersed state into the perfection and nobility of that divine condition in which it was originally

created. Secondarily and incidentally . . . it carried with it a knowledge of the way in which the life-essence of things belonging to the sub-human kingdoms—the metallic genera in particular —can, correspondingly, be *intensified and raised to a nobler form* than that in which it exists in its present natural state.' [63] (My italics). Both the Colour-Theory and the alchemical work are thus conceived on the same lines. What Goethe meant by the intensification of colour, it is difficult to say. Another expression which he uses may be of help. He speaks of the heightening process as a 'pressing of the colour into itself', [64] implying that the closer the particles of coloured matter come together, the deeper and therefore according to his theory the redder, the colour will appear.[1] This expression is clearly capable of a human interpretation, and appears to suggest an immense inward concentration. It may be compared with an equally cryptic statement of Boehme's: 'By seeking into itself, it [the Will] makes the centre of Nature.' [65] But it is still sufficiently vague and suggestive to render any interpretation suspect. The form of intensification is however the same both in Goethe's Colour-Theory and in the alchemical work. For the alchemist, it was a question of finding the 'seed', or 'centre', latent in the metals, which was already the potential form of the Philosophers' Stone. To allow this seed to develop, or alternatively to bring it to the surface, so that it could display its full powers, was a major part of the operation. Paracelsus writes that the small spark of the Quintessence, which men have inherited from the Father, lies hidden: 'that is, the body of the Sun [i.e. of gold] lies concealed in all imperfect metals', for which reason the 'metallic body' must be removed, so that the true Sun may arise. [66] In Starkey's allegory the 'radiant twinkling spark' grows until it has transformed the whole of the surrounding substance to its own form.[2] Louvigni spoke of God as a 'sun, with innumerable rays', which 'desired to be known and loved by my upper powers'.[3] In the same way, it is noticeable that Goethe speaks of the colour red as being present in a small degree in the 'lower' stages of colour. Red is the equivalent here of the alchemical seed of gold. There is an *oeil de rouge*, a tendency towards

[1] Goethe's demonstration refers to paint in powder-form, not to coloured light. See also p. 119 below. [2] See p. 28 above. [3] See p. 27 above.

red, in both yellow and blue. To produce red it is a question of intensifying and heightening these two opposites so that the red tinge becomes increasingly predominant and finally subsumes both in itself. 'This tinge grows continuously, so that at the highest degree of development it prevails.' [67] This is in fact the same process as that by which the crude saps in the plant were said to be purified and perfected so that the 'higher union' might take place. It is, if anything, a more suitable way of representing the alchemical symbol, since in the plant Goethe is unable to show that the seed itself is heightened in this manner. In the Colour-Theory, yellow and blue, being 'lower', or cruder colours, are gradually removed, and the tinge of red which they already contain is allowed to assume sway over the whole field of colour. Thus red corresponds in every way to the symbolical aspects of the Philosophers' Stone. It is the 'highest' form of colour, as gold was the highest form of metal; it contains both active and passive qualities; it contains also, either actually or potentially, all other colours; it is at one and the same time an 'ideal satisfaction' and a symbol of divine wrath; and it is formed by the removal of imperfections and the intensification of its own 'seed'.

The achievement of the Philosophers' Stone was also preceded by a 'death and rebirth', symbolized in the plant by the calyx and the corolla. This, too, finds a place in the Colour-Theory, although in a different form. The alchemists had an almost inexhaustible stock of symbols with which to illustrate their beliefs, and one of these was the process described as 'nigredo' or blackening. It was natural that some metals should assume a black appearance when 'reduced to their first matter', and black was moreover a colour naturally associated with death. Accordingly, the alchemists symbolized this loss of selfhood by such images as the 'Crow's Head', or they represented it as a dead man, with black crows hovering over his body. 'Thou must wait and wait until about the 40th day utter blackness begins to appear', writes Starkey; 'when thou seest that, then conclude thy Body is destroy'd, that is, made a living Soul, and thy Spirit is dead, that is Coagulated with thy Body.' [68] The same author gives most vivid expression to this belief when he writes: 'This is the true Ignis Gehennae for it eclipseth the light of the

Bodies, and it makes them become as black as Pitch; which is a symbol of Hell, and for its Cimmerian darkness is by many of the Wise men called Hell.' [69] It is true to say that whenever the alchemists speak of their process in terms of colours, they symbolize their 'death and rebirth' in this way. In Goethe's Colour-Theory, red is said to be produced in a similar fashion.

> Blue and yellow [he writes], cannot be made denser without another phenomenon appearing at the same time. Colour is, even in its lightest state, a form of darkness, and if it grows denser it must become darker; but at the same time it acquires a tinge which we designate with the word 'reddish'. This tinge grows continuously so that at the highest degree of development it prevails. [70]

The association which Goethe makes here between darkening and heightening is not fortuitous. He speaks elsewhere of his theory as the 'theory of heightening and shadowing', [71] and the two aspects are fundamental to his explanation of the origin of redness.[1] He is thus attempting to prove that the highest colour can only be achieved by an increase in darkness, as the Philosophers' Stone could only be achieved by complete renunciation. In this there is again a parallel to the metamorphosis of the plant. There the symbol of the centre and of rotation implied two things: death, and the unfolding of a new source of power. So too the colour red is seen to be at once a symbol of majesty, but one to be acquired only as the result of a progressive increase of darkness.

A further parallel to the Urpflanze is observable when Goethe describes the state of the red colour during the process of development. In the *Metamorphosis* essay the flowering plant, as opposed to the merely vegetating one, is said to have 'all its organs in a highly concentrated state, and developed very closely to one another'.[2] This appears to refer principally to the calyx of the plant, in which the sepals are said to be collected round the centre, 'close to one another', [72] in 'close inward union', [73] 'pressed close together'. [74] It is conceivable, although in this case by no means certain, that Goethe had in

[1] There may be some confusion of thought here. While yellow, according to Goethe's demonstration, does take on a tinge of red with an increase of opacity, that is, of darkness, blue gives rise to red with a decrease of opacity (see p. 112 above). Goethe speaks now as though both yellow and blue gave rise to red in the same way.

[2] See p. 94 above.

mind here a close approximation to the centre, something akin to the alchemical 'tincture', a closely compressed force confined in a small space. At all events, he uses similar language in describing the development of the red colour. As a synonym for the densening or intensifying process already referred to, he speaks of 'a crowding together of the parts', [75] almost precisely the words used to describe the condition of the sepals, which were 'pressed close together'. He illustrates his meaning with the example of red blood-corpuscles, which, when placed in water and thus separated, seem yellow, and only appear red when close together. [76] Similarly he says that a yellow fluid in a white bowl will appear increasingly red, that is, it will take on an orange hue, towards the bottom of the vessel, where it is seen through a greater quantity of yellowness. [77] Again, he writes in an article on the rainbow that red appears 'when the crowding together is complete'. [78] Prussian blue always takes on a red tinge, 'the more purely and more concentratedly [gedrängter] it is prepared'. [79] It cannot be said with any certainty however whether Goethe was thinking in these cases of the quintessential properties of the Philosophers' Stone, or whether he was symbolizing rather the approximation towards the centre. Both are in the long run the same thing. In both the essential feature is a 'concentration', or a 'contraction'. It was this systolic movement which, as Goethe said of the plant, was the essential feature in the ennoblement of the organism. The increase of concentration, like the increase of darkness, is a necessary preliminary of perfection.

There is one other point of similarity between the Colour-Theory and the theory of Metamorphosis. The flowering plant was described as reproducing itself in a simultaneous movement, whereas the vegetating plant proceeded by successive steps: this has been related to the timelessness of the 'higher union'. In the Colour-Theory this is paralleled by the suddenness with which the red colour appears and disappears. (This refers of course only to those experiments in which red 'develops' from yellow or blue. It is not true of red pigments, for example, although perhaps no pigment could retain this particular red.) Goethe remarks that all colours tend to be difficult to fix, but that this tendency is most pronounced near the 'culminating point',

that is, at the zenith of the colour-cycle where red appears. In illustration of this he quotes the example of litmus paper, whose colour can be changed from violet to reddish-yellow and back again by the use of acids and alkalis. In passing from one colour to the other, it goes rapidly through the 'culminating point', and Goethe suggests that an effort might be made to define the precise stage at which it does so. [80] This rapid appearance and disappearance of the red colour can also be observed in another way. When red is produced by the overlapping of violet and orange in the prismatic spectrum,[1] it is in fact extremely difficult to keep in view, and disappears as soon as the prism is tilted to a very slight degree either forwards or backwards. In emphasizing the extremely momentary appearance of this phenomenon, Goethe was probably bearing in mind the timeless nature of the experience which it symbolized. Both in the *Metamorphosis* essay and in the Colour-Theory he does his utmost to show that the 'higher union' is characterized by the reduction of temporal and spatial qualities to a minimum. In each case the symbol of union is described as highly concentrated in space, and instantaneous in duration. Moreover, the Philosophers' Stone was also said to come suddenly when the gradual process was completed. 'You will acquire, *in a moment*', says Welling, 'a blood-red, thoroughly saturated tincture, like clotted blood'. [81] Starkey, in his usual glory of language, declares: 'Then *in a moment* comes the Tyrian Colour, the sparkling Red, the fiery Vermilion, and the Red Poppy of the Rock.' [82] So also in the Colour-Theory, 'the mutability of colour is so great that even pigments which are supposedly well defined can still be changed this way or that'. [83] But in spite of this inconstancy it is possible to 'fix' a colour in certain circumstances. [84] In the case of red, the difficulty of 'fixation' is at its greatest, but it can nevertheless be achieved. And when it finally is fixed, it is within the narrowest possible sector of the colour-cycle. This is fully in accordance with the character of red as a union of opposites. As has been seen, Goethe includes, in the introduction to his Colour-Theory, amongst the opposites to be represented by the active and passive colours the categories 'here' and 'there', 'before' and 'after'. In describing red as the combination of

[1] See p. 113 above.

these broad categories, he is thus also including their spatial and temporal aspects. Like the Philosophers' Stone, red is the nearest possible approach to infinity and eternity.

The extent to which Goethe was influenced by alchemical symbolism is now partly apparent. Before going further however it is of interest to note that he also describes experiments with metals and minerals, in which he seems to have tested for himself the truth of the alchemists' claims, at least as far as transmutation by colour was concerned. [85] He remarks for example that when steel is heated there appears first a yellow hue—the *citrinitas* of the *Magnum Opus*—which gradually becomes 'darker and higher' and finally passes into purple. But this is characteristically difficult to maintain, and quickly passes into blue. Yellow iron ochre also, he notes with satisfaction, can be heightened by fire to a very high red. In another example he comes very close indeed to alchemy, when he remarks that oxide of arsenic, combined with sulphur, produces a ruby colour. Sulphur has already been seen to be a common alchemical ingredient, and arsenic was supposed by many to be itself the mysterious 'male matter' which was to impregnate the female seed and give birth to the Stone. In this particular case it is quite possible that Goethe was intentionally following out an alchemical recipe, much as modern chemists have done, in order to satisfy his curiosity. The result was one which probably delighted many an adept's heart. But there is of course no question of Goethe's having been deluded in the same way into taking the symbolical colour for the reality. He was undoubtedly interested solely in the extent to which the 'purple mantle of Sol' could in fact be induced in metals, and he makes no suggestion that the colour thus achieved implies any transmutatory power.

It is possible however to trace still further the symbolism of the Colour-Theory. In the *Metamorphosis* essay there was not only a higher union, in which the developed opposites were combined, but also a lower one in which they underwent no development. The former, represented by the union of the sexes, has been seen to correspond to the colour red. The latter, represented by 'vegetative growth', corresponds to red's complementary colour, green. This is produced, Goethe says, by the simple mixture of blue and yellow, [86] that is, without either of

the opposites having developed in any way. It is a unity, in which the two opposites are not completely consumed as in the higher form: 'the dual qualities are not removed.' [87] They are in a state of balance with one another, and their unity no longer recalls the separate components of which it is formed. [88] Green is a 'mixture of the two lower ends' of the colour-cycle. [89] Correspondingly, it is not, like red, an ideal, but a real satisfaction to the beholder. [90] It is thus the expression of an earthly happiness, a balance achieved without resort to supernatural means. It is a source of quiet visual contentment, the eye is soothed by it, and 'one does not desire, nor is one able to go any further'.[1] In beholding it, the mind grows at peace with things as they are, with reality, and it does not seek beyond for a spiritual meaning. To recall the poem *Selige Sehnsucht* once again, the pleasures of earthly marriage suffice, and there is no yearning for a heavenly union. This at least appears to have been Goethe's intention when he recapitulated the outline of his theory. 'If one has rightly understood the separation of blue and yellow', he writes, 'and has sufficiently considered in particular the development towards red, whereby the opposed sides incline towards one another and combine in a third being, then a certain secret significance will become apparent, to wit that a spiritual meaning can be read into these two separated and opposed beings, and one will scarcely refrain, when one sees them producing green below, and red above, from thinking in the former case of the earthly, and in the latter case of the heavenly creatures of the Elohim.' [91] To return to Boehme for a moment, the union of love in the fifth Quality is in his scheme a part of the 'heavenly ternary'. To this ternary the colour red belongs. The 'earthly ternary', in which I have suggested that the relatively undeveloped leaves of the plant are confined, is however clearly the region of the colour green. In this sense

[1] *Farbenlehre*, para. 801: 'Man will nicht weiter, und man kann nicht weiter.' This phrase is repeated by Schopenhauer in a similar context: 'So lange wir uns rein anschauend verhalten, ist Alles klar, fest und gewiss. Da giebt es weder Fragen, noch Zweifeln, noch Irren: *man will nicht weiter, kann nicht weiter*, hat Ruhe im Anschauen, *Befriedigung in der Gegenwart*.' (*Die Welt als Wille*. I. para. 8. *Sämtl. Werke* hrsg. P. Deussen, I, 41.) Since Schopenhauer was initiated by Goethe into the meaning of his Colour-Theory, this verbal reminiscence suggests that the colour green suggested to Goethe the calm state of the purely objective mind, untroubled by inward speculation.

therefore green represents the earthly and red the heavenly creatures of the Elohim. Goethe emphasizes this point when he remarks further that his six colours can be arranged in triangles to form the 'ancient and mysterious hexagram'. [92] By this he presumably intended that his cycle of colours could also be regarded in the following pattern:

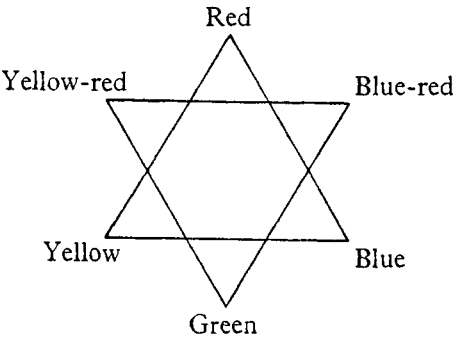


Fig. 5

Alternatively, since Goethe says the hexagram is formed by 'doubling and folding over', [93] the triangles may have been Yellow, Green, Blue, and Yellow, Red, Blue respectively. The general effect is of course the same, that is, they form the mystic Star of David or Seal of Solomon, a symbol of the macrocosm common both in the Cabbala and in alchemy. The two triangles represent in alchemy fire and water, and are used throughout the *Aurea Catena* in place of these words. At the same time of course they represent the whole list of opposites, active and passive, male and female, heaven and earth, the former of each pair being symbolized by the triangle with apex uppermost. Thus again red is included in the heavenly, green in the earthly ternary.[1]

Red was however not the only symbol of perfection employed

[1] Professor Gillies suggests that the sign of the macrocosm, contemplated by Faust before the Erdgeist appears, is this six-pointed star, and that Goethe probably knew of it through Herder's mystic hexagon. (Mod. Lang. Review, 1941.) While this kinship certainly exists, the symbol must have been very familiar to Goethe from his alchemical studies, that is, before he ever met Herder. It thus seems unlikely that Nostradamus, in whose book Faust finds the symbol, and who is identified by Max Morris with Swedenborg, by Professor Gillies with Herder, represents anything but an imposing name, an evocation of a famous figure in the magical tradition.

in alchemical literature. White was almost equally prominent, and the Stone was often said to be both red and white at once. So Basil Valentine had written: 'This Salt is a Hermaphrodite among other Salts, it is white and red, even as you would have it.' [94] Boehme also had spoken of the Child 'in its red and white coat', which was to announce the approaching conclusion of the work.[1] In using these two symbols together, the alchemists intended to emphasize the hermaphrodite nature of the Stone. White was the female, representing the Love of God, red was the male, and stood for his Wrath. The fact that red was sometimes spoken of as perfection itself, while white was on these occasions left out of account, is typical of the alchemists' complete disregard of rational thought. When they intended to emphasize the oneness, or the glory of the Stone, they spoke of it as red. When they needed to emphasize its dual nature, or its purity, it became both red and white.

In order to define Goethe's attitude towards white, it is necessary to return for a moment to his theory of 'das Trübe', the opaque or semi-opaque. All individual bodies were, in his view, to some extent opaque, no matter how great their degree of transparency. The mere fact that they were separate entities meant that the light, in passing through or by them, was limited in one way or another. 'Das Trübe' was thus a symbol of individuality, separateness, finiteness, in contrast to the universality and infinity of Light. Like Life, in Shelley's line, it stained the white radiance of eternity. Or, to quote Swedenborg, 'the emanating divine is indeed in every man, but it becomes obscured in a different way by each'. [95] To be 'trüb' was to be dark, as the German word implies. It was also to be finite, material, and specific. Colours themselves were limited in this way, for to be coloured was to possess a certain definition, whereas uncoloured light was beyond definition. Thus 'all living things strive for colour, for the particular, for specification'. [96] Like Boehme's Will, they are finite phenomena which intend to 'be something'. All individual things, by the very fact of their existence, are marked off from one another and are separate beings.

In Goethe's symbolical language it is implied that this state

[1] See p. 45 above.

of separation can be overcome, and some degree of perfection achieved even within the limits of earthly life. 'Opacity', or, as it might be expressed, 'finiteness', is capable of being raised to a condition close to that of light itself. It can become white, which Goethe calls 'the perfect opacity', [97] 'the perfect, pure opacity'. [98] In white, opacity is at its most perfect, and as in the case of red, such perfection is achieved by a 'coming together of the parts'. Snowflakes, Goethe notes, are almost transparent in separation, but, when they drift together, become dazzling white and totally opaque. [99] White, moreover, like light itself, is uncoloured, and thus lacks the definiteness and particularity inevitably associated with colour. For that which is opaque or coloured to become white is therefore, in Goethe's view, equivalent to the development of a finite being into its highest possible form.

A similar view is expressed in the *Metamorphosis* essay: The colour and scent of a plant's petals, according to Goethe, is 'probably due to the presence of the male seed in them'. This seed is 'not yet sufficiently separated, but diluted with other saps', that is, it is not yet completely liberated from its baser surroundings. 'The beautiful phenomenon of colour in plants', he concludes, 'suggests that the matter with which the leaves are filled is indeed at a high degree of purity, but not yet at the highest, at which it appears white and colourless.' [100]

The development towards the perfection of red was accompanied by a symbolical 'death'. The same is true in the case of white. Whereas all living things strive for colour, 'all creatures in which life is spent tend towards white, towards abstraction, generality, transfiguration, transparency'. [101] Thus white is the nearest possible approach to that loss of individual separateness which was the goal both of the alchemist and of the mystic. Here Goethe comes closest to holding, if he does not adopt, the belief expressed by Charlotte in the *Elective Affinities*. 'The pure feeling of a finite, general sameness, at least after death', she says—and this latter qualification should perhaps be stressed—'seems to me more satisfying than this egotistical, stubborn continuance of our personalities, attachments, and relationships in life.' [102]

Again, Goethe notes that the specific qualities of colours can

be removed by the influence of light, that is, by bleaching. In this way, he infers, 'light dissolves their specific qualities into a general whole'. [103] Water also, he observes again, may have a bleaching effect, and so also proves to be 'a dissolving, mediating agent, which removes what is accidental and leads the particular back into the general'. [104] The absence of colour implied by whiteness is thus akin to the alchemical 'dissolution', and 'reduction to the first matter', which was in turn much the same as identification with the whole. White is unspecified, general, undefined. To be white is, in Goethe's own words, to be transfigured. Thus the dual symbolism of the alchemists is repeated here also. Goethe ignores, so long as he is thinking of white, the fact that he has already spoken of red as the highest colour, and that, being a colour, red must also be defined and limited. So long as he wishes to emphasize the union of opposites, he speaks of perfection in terms of red. When however he intends to emphasize the loss of individual characteristics, he speaks of white. Such a procedure is not merely contradictory; it also leaves out of account far more facts than it includes.

As final evidence of Goethe's intention it is now possible to quote a passage not included by him in the Colour-Theory itself, but published with other writings in 1822-3. This appears in the Weimar edition under the heading: 'Truth, mystically portrayed'. [105] It consists of five short paragraphs taken from a work entitled 'Naturae naturantis et naturatae Mysterium in Scuto Davidico, etc.' (Berlenburg 1724). The argument it contains is similar in some respects to Goethe's theory of colours, and the title he gave to the extract implies that he wished it to be regarded as a parallel to his own teaching. The anonymous author declares for example that 'colours are divided according to Light and Darkness, and according to various degrees of the same'. [106] He also states that, while green is a mixture of the contraries blue and yellow, red (and yellow also, thus differing from Goethe) is not the result of a mixture, but 'arises from the natural progress of the Light'. [107] There is however by no means complete concordance between the views of this occult author and those expressed in the Colour-Theory, so that Goethe seems rather to have intended by his title merely to indicate the general source of the symbolism he had used. This

source is quite clearly defined by the unnamed author himself. 'He who ponders this matter more deeply', he declares, 'will be so much the better able to relate these remarks with the secret philosophy and experience of the chemists.' [108] This is the frankest declaration on Goethe's part, so far as I know, of the fact that his Colour-Theory was only to be fully understood in terms of alchemical symbolism. How far he was in agreement with the ensuing passages, which he also quotes, and which connect the colours with various planets, metals, degrees of light and darkness, and states of mind, it is however less easy to say. For the sake of clarity I give them below in tabular form. In the original they are mentioned in the same order, but without tabulation.

Red	Mars	Reddish Iron	Fire	Seeking, desiring
Green	Venus	Greenish Copper	Hiding of the light	Hoping, expecting
Yellow	Sol	Yellow-like Gold	Light	Finding, recognizing
Blue	Jove	Bluish Tin	Shadow	Marking, thinking
White	Luna	White Silver	Clarity	Possessing, enjoying
Black	Saturn	Black Lead	Darkness	Forgetting, renouncing
Mixed	Mercury	Quicksilver, the seed of all metals	(Not stated)	(Not stated)

In view of the wide divergence from Goethe's system in the first vertical column it would be rash to assume any correspondence between the qualities attributed to the colours in this table, and those intended by Goethe. Orange and violet, it may be noted, are omitted completely, while white and black are included. The 'seed of all metals' is equated with a 'mixed' colour, rather than with red, presumably because the author had in mind the totality which the seed symbolized. He was perhaps thinking of the Stone as the 'peacock's tail', which included all colours, rather than as the unity represented by red, or the

unity in duality represented by red and white. Nevertheless the last two columns do show the alternation of light and darkness, active and passive emotions, which Goethe emphasized so often. Whether these bore any relationship to the alternating expansion and contraction of the Urpflanze, which proceeded also by seven stages, in a 'spiritual ladder', to the seed, is however a matter for speculation only. It is as impossible to draw any precise analogy with the Urpflanze as it is to do so with the Colour-Theory. The important fact is that Goethe saw fit to hint at his alchemical sources.

Sufficient evidence has accumulated by now to make such speculation almost superfluous. The essential features of the Colour-Theory are entirely alchemical in conception. To recapitulate, the world of phenomena, here represented by the colours themselves, is said to be produced by the conjunction of opposites. Light meets Darkness, and is limited by it, so that the infinite becomes obscured in its finite manifestations. In these, the initial opposites continue to exist in a modified form, as active and passive, here and there, male and female. But this duality can be resolved into unity by a process of heightening or intensification. The process implies that the possibility of union is already present in both opposites: each contains the potential seed of perfection, which increases until it prevails over the surrounding imperfections. When this stage is reached, the transformation into the Philosophers' Stone, represented by the colour red, has been achieved. Red embraces in itself all discordant opposition, in such a way that the discordancy disappears. It is bounded neither by space nor by time, since both of these imply duality, and therefore opposition. It also contains in itself, either in reality or potentially, all other phenomena of its kind. For an individual phenomenon to develop into this universal form it must 'grow increasingly darker', that is, renounce its individual characteristics, and allow the whole, which already exists within in microcosmic form, to emerge. Alternatively, the separate being may forego completely its particular qualities and become part of a general whole, in which the particular and the separate become indistinguishable. Reduced to these abstract terms, the Colour-Theory resembles a number of mystical systems from many parts of the world. But the symbolism of

red, white, and black, and of the developing 'seed 'of red, is explainable only in terms of alchemy.

Goethe's theories in this field of knowledge, judged solely on their merits as science, have never gained much recognition from scientists. His most valuable results, according to the physicist Ostwald, arose from his treatment of complementary colours, and from his 'working out of a new physiologico-psychological domain, in which he acquitted himself brilliantly'. [109] On most other important points, according to the same authority, he was mistaken, either because of the inadequacy of knowledge in his age, or because of his inability to deal with the subject. He knew no mathematics, and considered it unnecessary to provide mathematical proofs. This, it has frequently been said, prevented him from understanding Newton, and seriously damaged his own theory. The reader who wishes for more precise information on the merits and demerits of Goethe's theory from the scientific point of view must however be referred to the specialized works on the subject.[1] These make it clear that, with the exception of Ewald Hering, whose theory of colours is said to owe something to Goethe's, no physicist or chemist of note has been able to accept his views. On the other hand, he was always supported by such men as Hegel, Schelling, and Schopenhauer, who were not primarily scientists.[2]

Such criticisms as have been made, and they are numerous, are however all concerned with the value of Goethe's theory as science. Few attempts have been made to judge the theory by Goethe's own standards. As in his biological work, he was not attempting to write science in the accepted sense of the word, but to combine scientific observation with intuitive beliefs. As

[1] An excellent summary of the views of critics and supporters is given by Manfred Richter in *Das Schrifttum über Goethes Farbenlehre*. A brief account in English which summarizes the case against Goethe is given by E. N. da C. Andrade in *Nature*, vol. 150, p. 275 (1942).

[2] J. M. W. Turner was also interested in the *Farbenlehre* and painted in 1843 two pictures in connection with it. ('Light and Colour [Goethe's Theory]—the morning after the Deluge. . . .' and 'Shade and Darkness—the evening of the Deluge.' Both are in the Tate Gallery.) He also made a detailed study of Sir Charles Eastlake's translation, a copy of which, copiously annotated in Turner's own hand, is now in the possession of Mr C. Mallord Turner. The annotations reveal a marked antagonism to Goethe's theoretical views, but suggest that Turner was prepared to experiment with their practical applications to painting.

far as scientific observation is concerned, it seems most probable that he was once again obliged to select his evidence, and to omit a great deal that did not fit. But what of his beliefs? Were these truly intuitive, or were they the result of his early initiation into alchemy? It is difficult to answer this question on all points. The colour red, for example, as Goethe attempted to show in his history of colour-theories, [110] has been regarded by many men, not all of them alchemists by any means, as the 'highest' colour. That is, it has been associated with royalty, power, and splendour, in a way which would seem 'unnatural' in the case of blue or green. There may be some obscure psychological factor which would account for this association, and justify to some extent Goethe's claim to intuitive knowledge. But for the greater part, his Colour-Theory does not appear to rest upon such perceptions as this, but on more or less arbitrary symbols derived from the alchemical tradition. To anyone who does not accept that tradition as authoritative, they must seem unfounded. In order to assess Goethe's work by his own standards, it will be necessary to sketch briefly his theory of symbolism.

Goethe distinguishes symbols from allegories. An allegory, in his definition, is a story or image which requires explanation, one whose meaning is not immediately obvious, but which has acquired a meaning through custom and usage. [111] The statue of Justice, for example, with its sword and balance and bandaged eyes, does not convey the meaning of justice at a glance, but needs to be interpreted to each newcomer. He may guess that the attributes represent retribution, equity, and impartiality, but he does not see the essence of these qualities with his own eyes. A symbol, on the other hand, is so closely identified with its meaning as to require no explanation. This difference might be expressed by saying that in an allegory, as in a simile, one needs a link: 'this *is like* that.' In a metaphor, the link begins to disappear, and one says: 'this *is* that.' In a symbol, there is no longer any distinction at all; the expression becomes simply 'this', and the object referred to conveys all the meanings which it can by its very nature convey. The symbol is reality itself, so that the need for comparison disappears. At most, one can say 'it is', but not 'it is this', or 'it is that'. The whole significance of the symbol lies in itself, it requires no

external associations to make its meaning clear, but each percipient knows of it as much as he can comprehend. Each, moreover, in seeking to interpret it, will give to it a different meaning. Since the symbol is reality, it will either appear to be pointless, that is, no associations will be made, or it will seem to be charged with an infinity of meanings. The former attitude might be described as purely materialist, the latter as metaphysical or mystical. Goethe adopts the second viewpoint: he sees the object as symbol and the symbol as object. In his hands the symbol becomes capable of innumerable interpretations. Like the musician and sculptor, whose sounds and forms have no specific meaning, and yet represent more than themselves, he employs language to trace out a pattern of universal significance.

Goethe clearly intended his Colour-Theory, like the whole of his science, to be symbolical in this sense. Over and again he called his discoveries 'open secrets', that is, things which would be obvious to anyone who saw them with the 'eyes of the spirit', although obscure to merely material observers. The latter, like the botanist C. F. Wolf, might see the reality well enough, but yet 'see past it'. [112] For Goethe to be justified from his own standpoint therefore his symbols would not only need to correspond to reality, but also to suggest further meanings to anyone willing to admit that more than one meaning is possible. On the score of reality, his case appears in some doubt. On the score of symbolism, he may be justified in some cases. It may be that red by its very nature suggests the associations which Goethe ascribes to it. The symbol of the centre, in the calyx of the Urpflanze, would also appear to be a true poetic image. There the association leaps to the eye: no previous knowledge of alchemical or mystical symbolism is required in order to understand Goethe's double-language. But the bulk of his Colour-Theory is, on his own terms, not symbolical, but allegorical. It depends on associations which are not based on the general experience of mankind, but on 'symbols' derived from the alchemical tradition. If these 'symbols' were as closely linked with reality as Goethe suggests, if they were all 'archetypal', in the Jungian sense, his case might appear the stronger. But in many cases they appear to be as much the result of custom and usage as, for example, the statue of Justice. For the most

part they do not convey a meaning without explanation. One example must serve to make this clear. In the seed of the plant, the alchemist, as well as Goethe, had an almost perfect analogy for the organic growth of the divine image in Man. This was perhaps a symbol in full accordance with Goethe's definition. When, however, the alchemist spoke of a seed in metals, he was transferring the analogy to another realm of nature where it does not apply. Metals do not grow, as Paracelsus thought they did, as fruits on a subterranean tree. This was in fact an allegory, a simile, which could only be understood with reference to plants. The immediate, verifiable association of ideas is lacking. Goethe, I suggest, commits the same mistake in his Colour-Theory. The tinge of red which he discovers in yellow and blue is as unreal as the alchemist's seed of gold. It does not develop organically in the way that a seed develops into a plant. Colours are, by their very nature, static, and do not admit the concept of dynamic growth. Goethe's meaning could, in fact, only be apparent to those who, like himself, were aware of the tradition of alchemical symbolism. He has established not an identification, but a comparison, not a symbol, but an allegory. The reader does not feel impelled towards a feeling that all Nature grows organically along the same road towards perfection, as Goethe intended that he should. The 'secrets', therefore, are not 'open', but such as can only be understood with the help of a key. One can only deplore the waste of Goethe's genius in attempting to prove a theory which, by his own standard of judgment, and on account of the very nature of the phenomena with which it dealt, failed to achieve its object. On the other hand one is grateful for a pattern of symbols which threads its way throughout the whole of Goethe's scientific and literary work, and provides an important clue to his view of Man and Nature.

CHAPTER VI

ANATOMY, GEOLOGY AND METEOROLOGY

GOETHE'S other scientific interests were concerned almost exclusively with three topics: anatomy, geology and meteorology, and all of them engaged his attention from the period of his first stay at Weimar onwards. His diary of 1780 shows that he was collecting specimens of stones and rocks at that time; in 1782 he wrote an account of the mineralogy of Thuringia; and in 1784 he kept a geological notebook of his visit to the Harz mountains. In the same year he wrote the essay *Über den Granit*, and his account of his Italian journey (1786-8) frequently refers to the various rock-formations he encountered. There appears to have been something of a lull between 1788 and 1804, when botany and optics held his chief attention (although some of the numerous undatable geological essays may belong to this period), but from then until his death the flow of geological writings is almost unbroken.

The history of his meteorological studies is similar. A letter to Frau von Stein of 1779 appears to mark Goethe's first observation of cloud-formation [1] while another of 1784 reveals his interest in 'Toaldo's weather-cycle', and his desire for a barometer and thermometer with which to keep records. [2] His diary for September 1786 also shows an attempt at explaining the formation of clouds in general terms, and later in the same year, while at Rome, he asked Frau von Stein for weather-data from Weimar. But again there is a lull, this time until 1813, when meteorological observations were begun in the observatory at Jena. In 1815, Goethe came to hear of the now standard classification of clouds, proposed by the English Quaker Luke Howard, and the interest thus revived again occupied him almost constantly until his death.

With anatomy, the story is somewhat different. He had studied it, although probably in dilettante fashion, while he was

still at Strasbourg University, and his physiognomical studies kept his interest in it alive until 1781, when he attended Loder's anatomical lectures at Jena. A period of intense preoccupation must have preceded the essay on the intermaxillary bone, written in 1784. From then on, his anatomical studies went on intermittently, hand in hand with the botanical studies, under the general title of Morphology.

In none of these studies, however, was Goethe able to achieve the certainty and conviction which inspires his botanical and optical works, and his theories are on the whole less articulate. Not that his plans were any the less ambitious. As early as 1784, he wrote to Herder that he had discovered a 'very simple principle' which would explain the formation of rock-masses. [3] In Italy, he was equally enthusiastic about his anatomical discoveries, declaring that he had 'discovered the thread through the labyrinth', and speaking of his thorough grasp of the nature of the human figure. [4] But he had less time to devote to the elaboration of these theories, which consequently show less coherence.

In anatomy, he attempted to define a primal animal, an 'Urtier', which would correspond to the Urpflanze. But in this case he was definitely in search of an ideal type, a concept of animal anatomy which would allow the varieties of bone-structure to be described as deviations from an ideal norm. 'It follows', he wrote, 'from the general idea of a type, that no single animal can be set up as a standard of comparison; no individual can be a model for the whole.' [5] This ideal type never came to have the precise definition of the Urpflanze. At most it was a list of the bones normally met with in animal skeletons, with their possible subdivisions, from which it would be possible to show how variations arose, and which would assist, as in the case of the intermaxillary bone, in the discovery of bones not immediately obvious to the eye. [6] Goethe draws nearest to the ideas contained in the *Metamorphosis* essay when he speaks of these variations as transformations of the bone: it is possible that he was seeking here some fundamental organ akin to the leaf. He was convinced, for example, and maintained in spite of the lack of indisputable evidence, that the vertebrae, which differed so greatly among themselves, and yet were all modifica-

tions of one type of structure, were also present in the skull, in an even more modified form. The spinal column from the base to the crown of the head must be a single chain of almost imperceptible metamorphoses. 'I have been convinced for thirty years', he wrote in 1824, 'of this secret relationship, and have constantly thought about the matter.' [7] But he was never able to produce the objective proof of this intuitive conviction. He also attempted to demonstrate in anatomy those ideas of expansion and contraction which play so important a part in the Urpflanze and the Colour-Theory. This is particularly evident in his essay entitled: *Differences of Contraction and Expansion in the Entire Osteological System.* [8] But here again his relatively greater respect for the facts restrained him from making, as Schelling might have done in his place, any general statement. Owing to this lack of a connecting theory running through the whole, the anatomical works do not lend themselves to symbolical interpretation. Such symbolism as there is remains on the very general level of systole and diastole, and there are none of the detailed analogies which characterize the Urpflanze and the Colour-Theory.

Goethe's studies in geology present a different case. It is true that they too never reached the state of completeness achieved in his principal theories. They consist for the greater part of essays on points of detail, field-observations of rock-structure, and reviews of geological works. Only rarely does Goethe formulate any general idea, or speak in the double-language encountered hitherto. But in spite of this lack of a comprehensive system there are isolated features of particular interest here.

Foremost among the geological issues in which Goethe was engaged was the controversy between the so-called Neptunists and Vulcanists, familiar to students of *Faust.* According to the eighteenth-century school of Werner, through which Goethe was introduced to geology, the primaeval world was supposed to have been entirely covered by the ocean. [9] Rocks had been formed in the first instance by precipitation from the receding waters. This was the Neptunist view, which further held that the most important and oldest form of rock was granite. It was maintained by the Vulcanists, however, that granite had originally been in a molten state, and had been intruded in this form into

still older rocks. This suggested that fire and not water was the primary agent. It also implied that granite was not the oldest form of rock, and the Vulcanists therefore gave priority to basalt. Moreover, since basalt could be clearly shown to be a product of volcanic activity, that is, of 'fire', the Vulcanists felt that their case was proved. Goethe himself however was strongly inclined towards the view of his first teachers, the Neptunists. In old age, he opposed in the strongest terms 'the whole damned rubbish-heap of the new ideas on the creation of the world'. [10] It is true that he declared himself open to the opposite view: when Alexander von Humboldt came out on the side of the Vulcanists in 1823, Goethe acknowledged his willingness to be convinced [11] and on another occasion he admitted that he might be biased. Had he been born in a region of volcanic activity, and not been so strongly influenced by Werner, he said, he might well have formed a different opinion. [12] But this does not alter the fact that he was fundamentally opposed to any theory which implied violent eruptions and cataclysms. He was convinced that the world could only have arisen through a gradual process of development. Storms and tempests there might be, 'but everything connected with a higher life is a peaceful becoming'. [13] The existence of volcanoes and earthquakes could not be denied, but he refused to attach any primary importance to them.

The reasons for this attitude are not hard to find. Goethe was fundamentally opposed to violent change of any kind, whether in politics or in Nature, and since this was a part of his whole philosophy, it would brook no contradiction in any field of knowledge. Religious convictions appear, however, to have also played a part. Thus in his notes for a lecture on the formation of the earth, in which he upholds the Neptunist view, he includes such comments as these:

> The former idea of a chaotic condition, which passes over from conflicting elements to a state of peace.
>
> The emergence of the world out of the waters was mentioned in the sacred books of the Jews. [14]

Similarly Wilhelm Meister, listening to the arguments of the two rival schools, is completely at a loss:

> Our friend was quite confused and downcast, for he still silently

cherished the old notion of the spirit which brooded on the face of the waters, and the great flood which had risen fifteen cubits above the highest mountains; and it seemed to him, amid all these strange speeches, that the so well ordered world, with all its plants and living creatures, collapsed in imagined chaos before his very eyes. [15]

Goethe remained true to the Neptunist theory because he saw in it a confirmation of the story of creation in Genesis. This, it is true, is not precisely an alchemical notion. Many geologists of the eighteenth century were inspired by similar motives. Nevertheless, Goethe must also have found such explanations in alchemical literature. Welling demonstrates at some length the crystallization of the dry land from the primal waters, [16] and Kirchweger, in the experiment already described, had shown how the 'earth' settled down as a sediment within the tumbler of rainwater. It is not unlikely that when Goethe discovered in later life that the same ideas were upheld by respectable scientists, he was gratified again by the concordance between his religious beliefs and established facts.

More definite evidence of ideas derived from alchemy is to be found in Goethe's beliefs about the earliest forms of rock. Again in accordance with the theories of Werner, he held that this earliest form was granite. In later life he was indeed obliged to admit, in the face of Vulcanist theories, that there was some doubt about the matter, and conceded that if granite was not the oldest form, it was at least the sole constituent of the earliest mountains known to man, whatever else might lie beneath them. But this did not affect the awe, the almost religious reverence with which he continued to regard the rock. One of his earliest geological works, *Über den Granit*, is devoted to its praise, and although it is not a scientific study, and is clearly not meant to be one, it reveals a great deal about Goethe's attitude. He begins by mentioning the former sacred uses of the stone in Egyptian obelisks and statues, and thus recalls the high honour attached to it by men.[1] Granite is 'the highest and the lowest', since its

[1] The actual information given in the first paragraph of the essay: that granite was originally called syenite, from the place Syene; that the obelisks made from it were set up by kings in honour of the sun; that its red colour gave rise to a name implying 'fire'; and that a granite obelisk was later erected in Rome—all seems to be a reminiscence of a semi-occult work whose title is noted in Goethe's Strasbourg notebook. This is *Naturae et Scripturae*

foundations reach to the profoundest depths, and its peaks outtop the highest hills. From a mountain summit in the Harz, he cries in rhapsody:

> Seated upon a high and naked peak, overlooking a broad region, I can say to myself: 'Here you rest directly upon ground which stretches down to the uttermost parts of the earth; no later layers, no heaps of washed-up rubble interpose themselves between you and the firm basis of the primaeval world; you do not walk, as in those lovely fertile valleys, over an endless grave, these summits have neither created nor consumed any living thing, they exist before all life and above all life. [17]

Granite was for Goethe more than a rock, it was an experience, a symbol of chthonic splendour. Poised on his mountain peak, he feels himself above all conflict, beyond the changes of life and death, yet secure in the knowledge that his feet, Antaeus-like, are rooted to the very bowels of the earth. The inward attractive forces of the earth draw him downward, the influence of the heavens holds him in check: he is balanced between one and the other. A feeling of utter loneliness sweeps over him, a loneliness which, he says, must come to any man who will open his soul to 'the first, most ancient, deepest feeling of truth'. He is raised up above himself and above all things, and yearns for the sky which lies so near. He sacrifices to the Being of all Beings. In this complete detachment from all sense of change, life and movement, he seems to feel himself at a point where earth and heaven meet.

Such language recalls the similar fashion in which Goethe was accustomed to speak of the colour red. Red too was a symbol of majesty, a beginning and an end, a meeting-place of heaven and earth, an object of awe and reverence, almost beyond time and space. There is moreover a precise connection between the colour and the rock, which suggests that both were for Goethe

Concordia, Lipsiae et Hafniae, 1752 (Author J. G. Wachter?). The passages in question are: Cap. III, paras. 14 and 25:

'Circa *Syenen* Thebaidis *Syenites*, quem ante *pyrropoecilon* vocabant. *Trabes* ex eo fecere *Reges*, quodam certamine, *Obeliscos* vocantes, *Solis numini sacratos*. . . . Alterum obeliscum, quem idem Rex in urbe Hieropolitana erexit, *hodie adhuc Romae conspici* ante Basilicam Lateranensem omnibus persuasum est.' (My italics.)

This remarkable similarity suggests either that Goethe's interest in granite may have dated from his student days, or that he had re-read the work more recently.

the expression of a single experience. For granite itself is frequently, though by no means always, of a red colour, and Goethe was vividly aware of the fact. Granite is for him at times simply 'the red stone', or 'the reddish stone'. So highly did he esteem it indeed that when a geological map of Germany was published, he suggested that it should in future be printed in colours, and that granite, together with other variants of the 'chief formation', should be represented by 'carmine, the purest, most beautiful red'. [18] These are unmistakably the terms in which Goethe always described the 'highest colour' in his Colour-Theory. Red symbolized for him that which was represented to the alchemists by the Philosophers' Stone. The reasons for his high esteem for granite are of a kindred nature: here again he felt himself awe-struck at the apparent union of opposites, the highest and the lowest, heaven and earth, the impulse towards the ground and the impulse towards the sky. It was a happy coincidence, and, as he felt, perhaps more than a coincidence, that granite was also red.

This was not however the end of the analogies which Goethe felt to be present in this natural structure. Granite was, he observed, normally composed of three principal constituents, quartz, feldspar and mica, although others might also be present. The idea which this suggested to his mind he was careful to express as a rule only in the most guarded terms. He writes, for example, that each of these constituents has equal rights, that none can be regarded as containing, or being contained by the others. [19] Again, he says that none of them appear, as would normally be the case with individual parts, to have existed before the whole, 'but rather to have arisen at the same time as the whole which they form'. [20] Nevertheless, on two occasions at least, Goethe reveals the guiding thought which led him to make these comments. The three constituents represented for him something akin to the triune nature of the Godhead. He refers to them first as the three-in-one, 'die Dreieinheit', but the reference is merely a passing one. [21] On the second occasion he is more explicit. 'The lowest, fundamental form of rock which we have found on earth', he writes, 'is granitic. Its distinctive feature is that it neither contains its parts, nor is contained by them, but possesses *a complete integration, a perfect*

trinity. The parts are equal in it, and none has any decisive preponderance over the other.' [22] All the components of granite were equally present yet equally distinct from one another from the beginning, as though the first creation of the spirit that brooded on the face of the waters continued throughout its existence to represent its Creator in its three-fold nature. Or, to express Goethe's meaning in another way, the history of the creation of the world repeated in itself the process of becoming in the God who fashioned it. It is difficult to decide just how Goethe understood the analogy. At all events, there was here yet a further parallel to the teaching of the alchemists. 'Lapis noster preciosus', wrote 'Raymund Lully', 'compositus est ex tribus, scilicet spiritu, corpore et anima.' [23] 'And thus', said Starkey, 'thy Work is brought to the true Touchstone, and that is Trinity in Unity.' [24] In this respect, the Stone was to represent the full integration of all human powers in one, and it was commonly spoken of as a trinity.[1] As Goethe wrote on another occasion, 'the most perfect state of health can only be reached when we are able to forget the separate parts, and feel ourselves as a whole'. [25] The same triple nature was also ascribed by the alchemists to the 'first matter', which was of course yet another name for the Stone. 'By the word FIAT (or, Let there be)', said Oswald Croll, 'God produced the first matter, which is threefold.' [26] In the same way, Goethe appears to have thought of granite as the first creation from the hand of God, and to have noted with gratitude that it too had three components. It would of course be absurd to suggest that the petrous nature of granite had anything to do with the Stone of the alchemists. It was not for this reason that Goethe viewed granite with such reverence. But the rock was for him an experience which tallied in many ways with the symbolical expressions of the alchemists. Its antiquity, its redness, its combination of height and depth, its apparently triune nature, all seemed to combine, and to confirm the validity of his spiritual experience.

Granite was however merely one variety of rock, and it remained to be shown how other varieties could arise. In Goethe's view this occurred when one of the constituents of granite gained

[1] See p. 41 above.

predominance over the others. It would then enforce its own mode of being on the rest, and oblige them to adopt its own form. [27] In this way, granite 'stepped out of itself', it relinquished its character and became metamorphosed. As it did so, a multitudinous variety came into being. Granite had 'ceased to rule'; there was now 'a state of anarchy' in which each component strove for mastery. As a result, the metallic formations appeared. [28] In this way, Goethe symbolizes, or rather sees repeated and unfolded before his own eyes, the pattern of development by which a multiplicity of phenomena arose from the divine source of unity. The cosmic process of creation is repeated once again on a smaller scale. The newly formed metals are not separate, special creations, but share in the nature of their origin, as the plant develops from and is determined by its seed. The dissolution of unity is caused by a factor akin to the overweening ambition of Lucifer, to whom, according to Goethe's youthful philosophy, the variety and duality of things was due. While variety exists, there is anarchy; each individual strives for predominance. The initial unity and integration is lost, the trinity has stepped out of itself, so that development and metamorphosis must continue until unity is restored. This initial unity is also described in terms of occult symbolism. In order to imagine the emergent multiplicity of phenomena, Goethe writes, one should think of it as a sphere which, as soon as one departs from its central point, sends radii in all directions. [29] Here again the symbol of God as a primal centre giving rise from itself to its creation is clearly expressed. Granite is, so to speak, at the centre of the wheel, the point of perfect unity and balance. When the balance is disturbed, that is, when the 'centre of peace' is lost, all possible forms of contrasting individuality arise. But just as, in the Urpflanze and the Colour-Theory, the initial unity is finally restored, so too, Goethe observes, it is not completely unthinkable that the minerals should again become transformed into granite. [30] Thus the cycle would be complete: the unity of one-in-three would have divided, and returned again to unity. Once again the 'macro-microcosmic procedure of Nature' [31] would repeat itself in its individual manifestations.

The manner in which such a rock as granite came into being

reveals further parallels. In Goethe's view, the formation of rocks was best described as a passing over from a fluid to a firm state, or, as the alchemists would have put it, a change from the volatile to the fixed. The first rocks were formed either by the cooling of molten, liquid masses, or by the accumulation of deposits. In both cases there was a 'solidification' into definite shapes, which thus passed from their former chaotic condition of fusion and acquired a definite identity. This process of solidification was regarded by Goethe as highly important. 'Solidification', he wrote, 'is the last act of becoming; it leads from a state of fluidity, through a plastic stage, to a state of firmness, and presents a picture of completed development.' [32] In so far, therefore, as granite was the form to which all minerals might return, in so far as it represented the final end of things, it was the 'last act of becoming'. Goethe visualized the process as a drawing together of individual parts. He defined three epochs in the formation of the world. The first was a striving on the part of the 'elements' to come closer together, to interpenetrate one another—sich zu durchdrängen—and to assume a shape. The second stage was one of 'isolation', in which the 'elements' appeared in separation, and existed individually. This was the period of anarchy, which arose when the harmony of the granite trinity was disturbed. Finally, the elements came together again, and existed next to one another. [33] Here the initial unity was regained. This process is identical in symbolism with that described in the *Metamorphosis* essay and in the Colour-Theory. There also the approach towards unity is accompanied by a 'crowding together' of the leaves, which stand 'next to one another', or by a 'concentration' and 'pressing together' of the colours. This in turn is paralleled by the concentrated tincture or quintessence of the alchemists. Thus again the 'final act of becoming' is regarded by Goethe as a concentration of hitherto separate parts, tending to return to unity.

There is an aspect of this process of solidification which requires special attention. In dealing with it, Goethe writes, 'we encounter another phenomenon, so undefinable as to leave us no peace'. He emphasizes the point: '*Solidification is allied with tremor.*' [34] By this he meant that as the aggregate of particles was about to solidify into a mass, the process was brought to a

rapid conclusion by a sudden shock. In illustration, he quotes the example of a glass of water very near to freezing-point. If the glass is shaken, the water suddenly solidifies and turns to ice. Rocks, he considered, must have been formed in a similar fashion. While still in a molten or liquid shape, they were disturbed by some external agency and at once assumed solid form. He observes for instance, in the case of ribbon-jasper ('Bandjaspis'), that as a general rule a number of parallel lines can be seen running through the stone. In some specimens, however, the lines are not always straight, but 'as it were displaced by a small start ('Schreck') at the moment of solidification'. [35] A similar example of a more violent shock was to be found in some forms of agate ('Trümmerachat'). 'Here also the first tendency towards ribbon-formation is unmistakable; but it was prevented by some disturbance, and divided into separate pieces'. [36] Again, Goethe cites the marble of the Florentine Ruins ('Florentinische Ruinenmarmor'), which had been about to assume a ribbon-formation, when it was disturbed by 'a kind of trembling or quivering', [37] which displaced the horizontal lines in an upward or downward direction.

In all these cases Goethe uses such words as shaking, quivering, trembling, tremor, shock, which are capable of being understood in a double sense. There is moreover no doubt that in describing the phenomenon in these terms he was drawing a parallel with his own experience. His whole attitude towards geology, as towards other sciences, was conditioned by his observation of his own inward development. Since 'peaceful becoming' was his ideal, he was unable to accept any theory which implied violent upheaval. He was however conscious of the fact that, as a poet, he was subject to moments in his development when the normal process of organic growth was interrupted. He regarded his poetic activity as an accumulation and aggregation of impressions which suddenly took shape at the instant of inspiration. 'Aggregation', as he called it, was of no use to him: it was as though he had tried in vain to light a fire with wood and straw—only when the wind blew through the smoking mass did it leap suddenly into flame.[1] Then the

[1] Diary, 26 Feb. 1780. Cp. Coleridge's aggregating Fancy and esemplastic Imagination.

accumulation of ideas ceased to be a collection of unrelated facts, and leapt forth Minerva-like as a welded and finished whole. In the well-known passage of his autobiography, in which he recounted the events which led to the writing of *Werther*, Goethe described this same experience, and offered, perhaps intentionally, a curious parallel to his geological theories. He had for some time past been carrying round the various details for the novel in his head; all the occasions when he had experienced the fears and fancies of Werther were present in his mind, but nothing would come of it, he needed some form in which to express them. Suddenly he learnt of Jerusalem's death. Soon afterwards he heard the precise circumstances. 'At that instant', he says, 'the plan for *Werther* was discovered, the whole shot together from all sides, and became a solid mass, just as water in a vessel, on the point of freezing, is transformed by the slightest shock into solid ice'. [38] Goethe uses exactly the same metaphor to define his poetic inspiration as to illustrate his geological theories. As the particles of rock slowly came together, and suddenly took shape under the influence of an outward agency, so too the novel assumed a definite form as the accumulated ideas swept into life and solidified into a whole. In both cases the moment of crystallization was accompanied by a tremor. In both the result was a unity in which the variety of its constituents could no longer be observed. Both forms of creation followed the same pattern.

It is impossible to say with any certainty whether alchemical symbols played any part in this particular theory, although the illustration does reveal most clearly the concordance which Goethe believed to exist between all forms of 'natural' development. The parallels with alchemical literature are not as close as one could wish, but they are close enough to suggest that better ones might be found. Firstly, as has been noted, 'solidification' bears some resemblance to the 'fixed' nature of the Philosophers' Stone, which was also often said to be 'coagulated'. Again, solidification was 'the last act of becoming', and thus akin to the final or quintessential stage in Boehme's scheme. It is noticeable however that the transition from the earthly to the heavenly ternary is in fact described by Boehme as a trembling: 'When the lightning strikes the wheel it becomes a cross and can

whirl no more, but stands trembling in the great power of the will of the eternal freedom which is God the father.'[1] This stage is also called 'der Schrack', the very term used by Goethe for the tremor in the rocks, and suggests, in Boehme's case, the shock of contact between the heavenly and earthly ternaries. The sect of Quakers owes its name to this same experience, and sudden religious conversions are frequently described, by those who undergo them, in terms of flashing lights and trembling bodies. One feels therefore that some of the alchemists also must have used such expressions, to portray the passing over from earthly imperfection to the divine unity of the Philosophers' Stone. But I have not chanced to come across any such passages. The Stone was formed suddenly, as has been seen.[2] Its appearance was also accompanied by gleaming lights striking 'from the centre to the circumference', and it was often said to crystallize. It was not, however, so far as my limited knowledge of the literature goes, said to be associated with any quivering or trembling. One can only say that Goethe, with his profound knowledge of similar inward experiences, is unlikely to have ignored the religious parallel. Granite represented for him the nearest approach possible to the awful majesty of the Creator, and it seems most probable that for him the three phenomena were one: the creation of the mountain-ranges, the moment of poetic inspiration, and the instant of contact with divinity were all accompanied and occasioned by a tremor of fusion.

This account of the imagery of Goethe's geological works unfortunately gives at once a too coherent and a too one-sided view of his theories. In singling out merely those aspects which are capable of symbolical interpretation, it is inevitable that all the purely factual observations and painstaking records which form the bulk of Goethe's writings on this topic should be left unmentioned. Not that these would justify his theories in the eyes of scientists—there is even more of the poet in these works than in those already discussed—but they do serve to impress on the mind that Goethe was not a mere dilettante in the study of geology. Again, some disservice is done to Goethe by dragging into daylight ideas which he was careful to express only in the most guarded terms. The parallels which he discovered were not

[1] See p. 44 above.

[2] See p. 120 above.

intended as final proofs, but rather as hints that such parallels might in fact one day be confirmed. Nevertheless, these were the ideas at the back of his mind, and he would have liked to prove them if he could. His geological theories are of one piece with his other ventures into science. Wherever he was able, he traced the same pattern of development in all forms of life, human, organic, and inorganic. Different sciences afforded different symbols: the symbol of the trinity which would not fit into the life of the plant could be found instead in the rocks; the developing 'seed' could best be illustrated in the Colour-Theory. But Goethe was always inspired by the same thought, that the process of inward development which he had learned from his alchemistic teachers could be shown to exist also in the external world of Nature.

Goethe's meteorological studies consist, like the geological ones, mainly of observations and records. The theories which he evolved were brief and can be divided into two main sections. The first of these is his attempt at explaining the changes in barometric pressure. He was inclined to ascribe these to a rhythmical pulse in the gravitational force of the earth, which caused the air above it to expand and contract alternately. Thus with a high gravitational pull the density of the air increased, with a low pull it decreased. [39] This theory however does not concern us except in so far as it shows once again Goethe's desire to show 'the eternal systole and diastole' at work.

The second of Goethe's theories, in which he described the formation and transformation of clouds, offers remarkable evidence of Goethe's faith, even in old age, in the symbols of the alchemists. The theory itself, outlined in the essay *Wolkengestalt nach Howard* (1817-20), [40] is a simple one. According to the opinions of meteorological experts, Goethe writes, it is reasonable to assume the existence of three regions in the air, a higher, a middle, and a lower. The last may, he says, be subdivided so as to give four regions in all, but he himself tends to speak of only three. These three regions are in constant conflict. When the higher region predominates, the weather is fine and dry; cirrus clouds appear, and the atmosphere is capable of carrying moisture, that is, it does not release the moisture as rain. The middle region, that of the cumulus clouds, is also capable of carrying

moisture, but in a less rarefied form; the moisture is 'not completely dissolved'. As a result, the clouds are more massive and heaped up. The lower region, however, in contrast to the higher, tends to drag down the moisture in the atmosphere and to cause rainfall. Here stratus and nimbus clouds, saturated with moisture, are formed, and spread out across wide regions. Changes in weather-conditions are due, Goethe believed, to a conflict between the higher and lower regions. On the one side is a power which 'dries up, dissolves, and consumes the water into itself'. [41] On the other side is a power which attracts moisture and increases it. In the middle region the battle takes place between these two powers, to decide 'whether the higher air or the earth is to be victorious'.

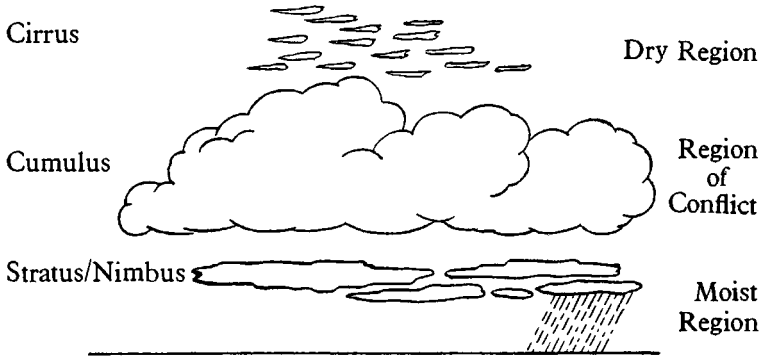


Fig. 6

When the higher region begins to predominate, the summits of the great cumulus masses begin to separate out. Smaller clouds detach themselves from the summits and rise upward till they are lost in the infinite space above. These are the cirrus formations. When the lower region predominates, on the other hand, the horizontal basis of the cumulus sinks down, the clouds stretch out into long layers of stratus, and finally descend to the earth in the form of rain. This process, according to Goethe's view, was continually in operation, and could take place in either direction. That is, the moisture could either be drawn up towards the higher region, where it became increasingly drier and finally disappeared completely in the dissolution of the cirrus clouds,

or it could descend towards the earth, until the clouds which contained it were no longer able to withstand the downward pull and were obliged to shed their load. There was thus a constant movement in the atmosphere as the two opposing powers strove for mastery.

It might well be suspected that here again Goethe was expressing his belief in the universal existence of contrasting opposites, and this was in fact the case. He himself draws attention to the analogy between his Colour-Theory and his theory of cloud-formation. In his studies of chromatics, he had opposed Light and Darkness. But these, he says, 'would never in all eternity have any relationship to one another, did not Matter come between them'. [42] Only when some opaque or semi-opaque object was interposed between the opposites could colours arise. In the same way, he continues, there is on the one side the attractive force of gravity, drawing the moisture downwards, while on the other side there is a 'warming force' ('die Erwärmungskraft'), causing the moisture to dissolve. The two are independent of and opposed to one another. Owing, however, to the presence of the atmosphere, the conflict between these two opposites can become apparent, and reveals itself in the form of 'weather'. Clouds are thus equated with the equally transient phenomenon of colour, and can arise only when the opposition of the two forces is mediated. In this way, Goethe associates Light, expansion, warmth and dryness, and opposes to them Darkness, contraction, cold, and moistness. The association is however not an accidental one. It already existed in the alchemical lists of opposites. Welling writes, for example: 'Nature admits nothing but light and shade, that is, heat and cold, which again is nothing else but dryness and moisture.' [43] It will be recalled also that the light colours, yellow and orange, were warm tints, whereas the dark colours were cold. Similarly the metamorphosis of the plant was said to be hindered by an increase in moisture, and assisted by a greater exposure to air and light. Goethe's whole theory is in fact foreshadowed in a passage of the *Aurea Catena*. It is claimed there that the sun's warmth draws the water as 'steam and mist' into the air, where it is distilled and falls again as rain. 'Then', says Kirchweger, 'the sun comes again, dries up and coagulates the earth

once more, so that it becomes thirsty, and *draws the moisture to itself again.*' [44] The association of light, dryness and warmth with heaven, and darkness, moistness and cold with the earth, was common among the alchemists. The Philosophers' Stone was often called 'dry' and 'fixed', and 'a water that does not wet the hands'.[1] Perfection was always associated with dryness, imperfection with moisture.

The question now arises, whether in Goethe's account of cloud transformations the ascent towards the heavens, with its increasing dryness, was also intended to have a spiritual meaning. This appears most probable in a verse of his poem *Howards Ehrengedächtnis*, in which the development of the clouds from earth to sky is set out. In the cirrus-clouds, the 'noble impulse' rises ever higher. They feel the urge for 'salvation' and mount like lambs from the summit of the cumulus, growing ever smaller until they flow gently back into the bosom of God:

CIRRUS

Doch immer höher steigt der edle Drang!
Erlösung ist ein himmlisch leichter Zwang.
Ein Aufgehäuftes, flockig lös't sich's auf,
Wie Schäflein trippelnd, leicht gekämmt zu Hauf,
So fliesst zuletzt was unten leicht entstand
Dem Vater oben still in Schoos und Hand.

The ascent of the clouds represents in yet another form the ascent of man and of all things towards God. As in the stem of the plant the sap was purified and rarefied in mounting the stem, so here the upper, drying force dissolves the moisture and, so to speak, removes all imperfections. The cirrus clouds at last 'disappear in infinite space'. [45] They lose, that is, their individuality as separate beings, just as colours, under the influence of light, become white and indistinguishable.

The symbolism of the cirrus clouds is however more specifically alchemical than has hitherto appeared. In order to demonstrate this, it is necessary to go back to one of the two alchemical experiments described by Goethe in his autobiography, that of the 'Airy Salt'. Fräulein von Klettenberg, he says, had obtained for herself an alchemical furnace, with vessels and retorts, and

[1] Apart from any symbolical implications, this would of course refer to metallic mercury, which runs like water but does not moisten.

was, when Goethe began to assist her, carrying out the operations described by Welling for the production of the Philosophers' Stone. For these operations certain alkalis were required, which, 'as they melted away in the air, were to combine with the super-terrestrial things, and at last to produce, *per se*, an excellent and mysterious mediating salt'. [46] The salt thus formed would undoubtedly have been regarded as the Stone, which would in this way have combined, as always, an earthly with a heavenly state.

Experiments of this kind are common in alchemical literature, and they are easily described. The 'elements', or minerals, were placed within a closed vessel and there heated. As boiling point was reached, some of the contents evaporated and rose upward in the form of vapour or gas. In this way, the spirit of the metals was supposed to have been released from its base surroundings, and it was this spirit which was said to be rising within the vessel. In doing so, however, it frequently formed a deposit on the inner surface in the shape of flower-like crystals. These crystals were said to be a salt of great power, which had been formed by the union of a higher being with the escaping spirit of the metals. Two passages from Starkey will serve to show the manner in which the alchemists described this operation. 'You then shall see', he writes, 'Vapours begin to arise again, first like to a Smoak, which will after return in drops condensing on the Vessel sides, which believe me is a gallant sight, for . . . such colours will appear as thou canst not imagine.' [47] Elsewhere he continues: 'The Key of the Work . . . is a Sublimation in a continual Vapour, that what is Heavenly and subtile may ascend aloft, that is, to the upper part of the Vessel, and there take the nature of a Body Heavenly, or a Spirit; and what is gross may remain below, in the nature of a Body Earthly, which is the end of our Mastery, to bring the Bodies which are compact and dry, to become a Spiritual fume.' [48]

This simple procedure was disguised by the alchemists under many names. It was called, for example, the palingenesis of plants, because the crystals resembled flowers, and it was thought that these had arisen through the 'death' of the metals in the flames of the furnace. It was also symbolized as a flying dove: 'Putrefaction', wrote Starkey, 'will be compleat, and then Sub-

limation or Circulation will begin again, which in 46 or 50 days will end in a white Dove'. [49] An eighteenth-century illustration makes this symbolism quite clear. A closed, transparent flask is depicted, in which lie the four elements, earth, air, fire and water. These represent the alchemist's minerals or metals. Rising from the elements towards the neck of the vessel is a dove, which clearly symbolizes the escaping 'spirit'. [50] In other passages not one, but a number of doves are mentioned, and they are attributed to Diana.

The vapours or gases were also described as clouds. 'Know', said Starkey, 'that all your progress in this work is to ascend in Bus and Nubi, from the Moon up to the Sun; that is, in Nubibus, or in Clouds. Therefore I charge thee to sublime in a continual vapour, that the Stone may take Air, and live.' [51] This appears to have been a symbol of some antiquity, for Heliodorus makes the Stone say: 'I step like a breath of air out of the middle of the water-bath, my robes are clouds of mist. . . . Like a very thin cloud of smoke I rise aloft, carried by the air, which conceals me wholly in itself.' [52] If Goethe came across such passages as these, it would need no great step to associate his meteorological studies with alchemy.

But the vapours were not only associated with doves and clouds, but also with human beings. Thomas Vaughan, in his magical writings, quotes the saying of 'Raymund Lully' that the alchemist would see in his operations 'spiritus fugitivos in aere condensatos, in forma monstrorum diversorum, et animalium *etiam hominum, qui vadunt sicut nubes*, modo huc, modo illuc'. [53] (My italics). There is also an alchemical illustration, reproduced by C. G. Jung, in which this same experiment appears to be depicted in the form of naked boys rising out of fire or steam, just as the dove rose out of the elements. Jung explains this as 'personified spirits escaping from the heated *prima materia*'. [54] In these examples, the practical aspect of the laboratory operations begins to recede, and the symbolical aspect, that which had reference principally to the spiritual progress of men, begins to appear.

Theoretically, however, almost any symbol would serve to describe the operation. As Starkey wrote: 'When . . . the colour changeth to white, they then call it their Swan, their Dove, their

white Stone of Paradise, their white Gold, their Alablaster [sic], their white Smoak, and in a word whatever is white they do call it by.' [55] One essential feature of the symbol was whiteness; another, not so essential, but nevertheless very common, was that of numerous small particles, separated from their base matter and rising to join some celestial power. To quote a Chinese text: 'In the sixth month the white snow is suddenly seen to fly. . . . Because . . . the steam is heated, and when it has passed the boiling point, it mounts upward like flying snow.' [56] White crystals, white doves, naked boys, white particles of vapour, or indeed white particles of any kind would serve the same purpose. Welling describes, for example, how the 'philosophic mercury', by which he here means dew, descends during the night, so that it may be 'drawn up on high again by the magnetic power of the sun, in the form of the most subtle *specks of sun-dust*'. [57] (My italics). The main object of the operation was, as he says, to find a Universal Solvent which should 'dissolve all metals without distinction and separate them into the smallest possible parts'. [58] This Universal Solvent was mercury itself, for 'just as a highly rectified spirit separates the bodies into the smallest possible parts, so too the heavenly mercury dissolves the bodies of all three Kingdoms, without force or compulsion, into their first essence, or timeless form'. [59] Thus once again the purpose of the work is said to be a dissolution of the elements into tiny fragments.

The lines of Welling just quoted reveal the meaning of this symbol. The reduction of the metals or minerals into their smallest parts is equivalent to the return to the primal matter. In this case it is not the metals themselves in their molten state which represent the primaeval chaos, but the innumerable small particles of vapour. These, by rising into the air, are said to return to their 'timeless form', and are thus also joined again with the source of all things. In the same way of course the spirit of man was to be purified 'in the furnace', to abandon its baser qualities, and to assume also that divine condition beyond space and time in which it surrendered all individual characteristics in the whole. 'Even a dead man's form', wrote Welling, 'evaporates completely into the air at its dissolution, and he assumes the same first matter, from which he has been composed

and nourished, together with that by which we exist, live, and are fed.' [60] In the same way, he seems to suggest, all dead things return by 'evaporation' to the first matter. And, in so far as 'death' implied renunciation within the course of earthly life, the symbol of the white doves and rising mist presumably stood for some mystical experience, which only the fully initiated could know. 'The means to get this (Stone)', according to Starkey, 'is to learn to turn thy Body into a vapour, that is, into Mercury, which then ascends in form of a vapour.' [61] The word 'Body' undoubtedly bears here two meanings; it refers both to the metallic and the human body. The full implications of this alchemical experiment thus suggest that the adept was attempting, so to speak, a dissolution of his personality into a myriad of component parts. Presumably the 'full integration' of the personality, so often mentioned, was expected to be achieved after this dissolution had been undergone.

The question now arises, whether Goethe had this same symbolism in mind when he was engaged on his meteorological studies. In these also he speaks of small white particles, the cirrus clouds, which are dried out and separated from a mass. They too are joined with 'superterrestrial things', since they flow 'into the bosom of the Father'. There is also a suggestion of the return to the primal matter, since they disappear into infinite space. There is nothing to suggest that a purely mystical symbolism was intended by Goethe, that is, that he himself deliberately sought any experience of trance-like states. Nevertheless, the parallel with alchemical symbolism can be demonstrated conclusively with a little further examination.

Amongst Goethe's records of weather-observations there is one which bears the date 11 May 1820. This was, as he noted immediately beneath the date, Ascension Day. [62] He does not as a rule mention the feasts of the Church in his meteorological records, and it has been suggested that in this particular case he had a special reason for doing so.[1] The first observation, immediately following the date, in fact concerns a number of cirrus clouds which dissolved as they crossed the sky. That is,

[1] See K. Lohmeyer, 'Das Meer und die Wolken in den beiden letzten Akten des *Faust*', *J.G.G.* vol. XIII. The following argument is partly based on this stimulating essay.

Goethe observed on this day precisely that natural phenomenon which might bring to his mind the idea of Christ's ascension into heaven. The clouds, as they rose out of the mass of cumulus and slowly disappeared in the blue sky above, may well have reminded him of the happy coincidence that this was also Ascension Day.

It has also been suggested, however, that another analogy was present, or developing, in Goethe's mind as he watched these clouds. Faust's ascent towards union with the Madonna is portrayed in a very similar manner. He himself, or his immortal soul, is borne aloft by a host of angels. At the same time, a choir of boys, enveloped in cloud, rises with him. As they float up the mountainside through the pine-trees, they first are perceived by the Pater Seraphicus, looking down from the 'middle region'. For a moment, he in fact mistakes them for clouds:

> Welch ein Morgenwölkchen schwebet
> Durch der Tannen schwankend Haar!
> Ahn ich, was im Innern lebet?
> Es ist junge Geisterschar.

This band of spirits, who have never known life on earth, join the Pater Seraphicus, and are initiated by him into earth's mysteries. But they cannot bear to look on so much suffering, and continue their hovering flight towards the summit of the mountain. Here they are again seen, this time by a company of angels, in the form of clouds:

> Nebelnd um Felsenhöh
> Spür ich soeben
> Regend sich in der Näh,
> Ein Geisterleben.
> Die Wölkchen werden klar;
> Ich seh bewegte Schar
> Seliger Knaben.

The immediate source of this image can be traced back to a moment of Goethe's life some fifty years before these lines were written. From Salenche, in Switzerland, he had written in 1779 to Charlotte von Stein of just such a scene. There, in the mountains, he had observed 'fine clouds of mist rising upward from the fissures in the rocks, as though the morning air were

awakening young spirits, who desired to open their bosoms to the sun and gild them with its glances'. [63] On the same day, he wrote of the sky being 'covered with white lambs'. It was as though the sun was 'drawing towards itself the faintest evaporations from the highest snow-capped mountains'. [64] But while this was the actual experience, does it not also suggest that as far back as 1779 the symbols of the alchemists were present in Goethe's mind? There also the 'magnetic power' of the sun was said to draw up spirits to itself. Clouds, naked boys, young spirits, all represented the same ascent of the soul towards union with God. In *Faust* also, the choir of pure youths ascend in this way, enveloped in cloud.

At the summit of the mountain this rising host takes over Faust's soul from the band of angels. For the remainder of the ascent, Faust rises in their company. The words with which the choir of boys accept their burden deserve special attention:

> Freudig empfangen wir
> Diesen im Puppenstand;
> Also erlangen wir
> Englisches Unterpfand.
> Löset die Flocken los,
> Die ihn umgeben!
> Schon ist er schön und gross
> Von heiligem Leben.

The word *Flocken* in this passage has always presented a difficulty. It normally means 'flakes', as of snow, or 'flocks', as of wool or cotton. But these meanings clearly do not apply here. The lines are therefore interpreted as a rule in association with the word *Puppenstand*, the pupa-stage in which Faust is now supposed to be. On this reading, the word *Flocken* is best translated as 'husks', or 'wrappings',—the chrysalis covering which is to dissolve and allow the fully ripened soul to emerge. On the other hand, it has been suggested[1] that the word is always associated by Goethe with the cirrus-clouds. He does in fact almost invariably compare these in one way or another to 'fleeces', or 'flocks', or 'lambs'. He speaks of them as 'aufgezehrt und zu Flocken gekämmt'; 'sie ziehen sich flockenweise in die Höhe'; 'ein Aufgehäuftes, flockig lös't sich's auf'. Or again,

[1] By Lohmeyer. See p. 153 above (note).

they are described as 'wöllige Wölkchen'; 'Schäflein leicht gekämmt'; 'gelockte Baumwolle'; 'durch die Atmosphäre gekämmt'. [65] In each case the metaphor is of fleeces and lambs. Thus Goethe may perhaps have intended the separation of the *Flocken* from Faust's soul to be visualized as the dissolving of the cirrus-clouds about him. The word would then mean 'flocculi', or fleecy clouds. But the 'pupa-stage' makes this interpretation somewhat dubious. The difficulty can perhaps be resolved by examining another use of the word *Flocken*.

In Goethe's late essay *Über die spirale Tendenz der Vegetation* he describes a water-plant, the *Valisneria*. In this plant the male and female parts grow on separate stems beneath the surface of the water. At the moment of pollenization, both parts have risen to the surface, whereupon the male plant scatters out its seeds, which now float across towards the female. Goethe describes this phenomenon in these terms: 'The sheath divides into four, and the seeds, slipping way in thousands from the "spike", swim out across the water, looking like silver-white "flocks", which, as it were, toil and strive to reach the female.' [66] Here *Flocken* means neither cloud nor fleece, nor chrysalis, but is used simply in order to vivify the image of the seeds as they stream towards the female plant. The union of male and female in the Urpflanze represented, as has been seen, the union of man and God. So also in the *Valisneria* the union is accompanied by the passing of 'flocks' from the one to the other. It seems possible therefore that the word had no specific meaning in Goethe's mind. Just as the alchemists could employ any symbol involving white particles, in order to represent the ascent towards union with the divine, so too Goethe employs the word *Flocken* whenever the same image enters his head. *Flocken* had no definite connotation except that of white, fleecy, or flake-like particles streaming upward from earth to heaven, or across from male to female. Faust's ascent to the Madonna, the ascent of the cirrus-clouds towards the Father, the union of male and female in the plant, are all symbolized, as the 'union of heaven and earth' was symbolized in alchemy, by the image of countless white bodies rising aloft or passing across.

The final link with alchemical symbolism is also to be found in *Faust*. At one point in his meteorological studies Goethe

describes the various kinds of cirrus-clouds which may be seen. 'All these cases', he writes, 'can be given the name of Cirrus, as well as those lightly floating clouds which so often pass across the face of the moon.' [67] The moon is of course a female symbol, and it is worth noting that it is also often associated with the Virgin Mary. If Goethe was thinking here of alchemy, he might well have been pleased to observe that the cirrus-clouds were often close to the moon, just as the white doves of Diana, the moon-goddess, rose towards union with the heavenly powers. Goethe's picture of the Madonna at the end of *Faust* does in fact show her surrounded by clouds:

Um sie verschlingen
Sich leichte Wölkchen,
Sind Büsserinnen,
Ein zartes Völkchen. . . .

This image of the moon, or the Madonna, or the Eternal Feminine, in a ring of clouds seems to have had a special fascination for Goethe. In another passage of *Faust*, it appears once again, with a curiously interesting addition. The scene is the Aegean Sea, towards the end of the Classical Walpurgis-night. The moon, which has reigned over the whole festival of the elements, is now seen to be encircled with clouds. But, the Sirens sing, they are not clouds in reality:

Sirenen: Welch ein Ring von Wölkchen ründet
Um den Mond so reichen Kreis?
Tauben sind es, liebentzündet,
Fittiche, *wie Licht so weiss.*
Paphos hat sie hergesendet,
Ihre brünstige Vogelschar;
Unser Fest, es ist vollendet,
Heitre Wonne voll und klar!

Nereus: Nennte wohl ein nächtger Wandrer
Diesen Mondhof Lichterscheinung;
Doch wir Geister sind ganz andrer
Und der einzig richtigen Meinung:
Tauben sind es, die begleiten
Meiner Tochter Muschelfahrt,
Wunderflugs besondrer Art,
Angelernt vor alten Zeiten.

These clouds which fly to meet the moon are white doves. Released by Aphrodite on Paphos they stream upward, gleaming white and consumed with love. The festival has reached its end, and it remains only for Homunculus, himself on fire with adoration, to shatter his phial against the sea-shell of Galataea, and yield up his life to the ocean. The ring of doves is thus as much a symbol of consummation as the ascending clouds of *Faust* or the silver-white flocks of the *Valisneria*. It is true that they are not the doves of Diana. But they are released by Love, by 'the desire and pursuit of the whole', and it is to Diana that they fly. Here again, then, there may well have been some reminiscence in Goethe's mind of the studies of his youth. Doves, clouds, young spirits, seeds, all join in one universal movement of male to female, earth to heaven, towards that moment of which Faust's Emperor spoke:

> Wo mit der obern sich die Unterwelt,
> In Einigkeit beglückt, zusammenstellt!

This amazing weave of thought and imagery between *Faust* and Goethe's studies in meteorology and alchemy can now be traced through. In his youth, he had believed it possible to acquire a wonder-working salt, representing the union of heaven and earth, by heating metals or chemical substances and collecting their crystalline deposits. But the absurdity of the experiment led him to abandon his efforts. At the same time he still retained a vivid impression of the symbols involved: the rising doves, clouds, and spirits remained in his mind, and often recurred when he thought of man's spiritual striving. Later, he came to feel that Nature herself offered such symbols in plenty. How soon he observed the parallel it is difficult to say. He comes close to it in one of his earliest poems 'Glück der Entfernung':

> Aufgezogen durch die Sonne
> Schwimmt im Hauch ätherscher Wonne
> So das leichtste Wölkchen nie,
> Wie mein Herz in Ruh und Freude. . . .

When he began to study the clouds in earnest, the symbol of the young spirits seemed, in Switzerland, to be presented before his very eyes. Perhaps from that time onward, the fleecy cirrus-clouds became identified for him with the doves and vapours of

the alchemical retorts. Thereafter, the symbol could be turned so as to sparkle in many directions. The choir of innocent boys, Faust's ascent towards the Virgin, the doves encircling the Beloved, the clouds about her feet, the silver-white pollen streaming across the water were all associated with each other and with Ascension Day. Goethe must have felt that the old claim of the alchemists to take the whole world for their laboratory had at last been granted.

In this last study the scientific aspect of Goethe's theories has naturally been left completely out of account. He must have been well aware that he was writing not as a scientist, but as a poet, and exercising the poet's right to the use of metaphor and analogy. The statement that clouds are doves, which must have been in Goethe's mind when he made his meteorological observations, would be totally unacceptable in a scientific work, although it arouses no objection in its imaginative context. Goethe was convinced, however, that science and poetry must not be kept apart. In the same way that his scientific studies provided images for his poetry, so also imaginative ideas might bear fruit in the scientific field, even though it might not be possible to meet the strict demands of empirical proof. In his meteorological and geological studies he has drifted over almost entirely to the side of poetry. The result is that, freed for the moment from the need to criticize scientifically, we can enjoy with Goethe a purely visionary prospect of the unity of Nature.

PART III:

LIFE AND LITERATURE

CHAPTER VII

THE *MÄRCHEN*

IN the year 1795, a few years after his first contributions to botany and optics, Goethe composed a number of short stories and anecdotes, published under the title of *Conversations of German Emigrants*. The name was given in allusion to the inhabitants of Western Germany who were driven out of their homes by the armies of the French Revolution, and the stories were supposed to represent the tales with which the emigrants amused themselves during the pauses of their flight. There is, however, very little political matter in them. For the most part they are concerned with the supernatural: haunting footsteps, ghosts, premonitions of death, sympathetic reactions between non-living objects, and the like, all treated in a matter-of-fact and circumstantial manner. The last of these narratives is the *Märchen*, a fairy-tale crammed with mysterious prophecies and allegorical or symbolical fancies. In view of its position at the end of this series, it is difficult to see why the *Märchen* should have been interpreted, by some commentators, as an allegory of the French Revolution, or of the internal conditions of the Duchy of Wiemar. The atmosphere of the story suggests the supernatural, or at least the occult and the mysterious, as much as those which precede it.

But any interpretation of the tale which pins it down to a particular meaning is bound to destroy rather than illuminate its purpose. Goethe himself was greatly amused at the prospect of the scholars who would set to work at reading into it their own theories, and promised to provide the solution only when ninety-nine others had failed.[1] As he remarked, the story is at once meaningful and meaningless ('bedeutend und bedeutungslos'). [1] The emigrant who tells the tale says of it, 'it is a fairy-story which will remind you of everything and nothing'. [2] To restrict its symbolism to a particular set of events in

[1] His solution is long overdue.

time and space is therefore to mistake Goethe's intention. Like the Urpflanze, the *Märchen* is a symbol which represents not only itself, but all things, and the reader can understand it in whatever way he chooses. He is limited only by the kind of significance to be attached to each event. The task of the interpreter is, therefore, not to associate a definite meaning to each character, but to define the nature of the symbols involved.

These symbols, however, must not only be dealt with in the same way as those of the Urpflanze. They are, for the greater part, exactly the same symbols, and express in almost identical terms the same pattern of development. The *Märchen* is, in every important respect, an alchemical story, resembling the allegories with which the alchemists frequently described their search for the Stone.[1] It is indeed possible that it was directly inspired by one of these. In 1786, after Goethe had read the *Chymical Wedding* of Christian Rosencreutz, he wrote to Charlotte von Stein that it had the makings of a good story. 'There will be a good fairy-tale to tell at the right time, but it will have to be reborn, it can't be enjoyed in its old skin.' [3] This may well have been the beginning of the *Märchen*, for although the allegory of Christian Rosencreutz bears little resemblance to Goethe's story, it does employ some of the same symbols. Nor did Goethe forget the idea, for it recurs in his history of Colour-Theories, in the section dealing with alchemy. There he wrote: 'It leads to very pleasant thoughts if one makes a free adaptation of what we may call the poetical part of alchemy. One finds a fairy-tale, arising out of certain general ideas, and based upon a suitable natural foundation.' [4] It has already been seen how these general ideas came to be expressed in the Colour-Theory itself. In the field of literature Goethe was able to use the alchemical symbols almost undisguisedly.

The scene of the story is laid in a strip of countryside divided by a river. On one side of the river lives a maiden known as 'the beautiful Lily', the object of all men's desires. But her beauty is deadly, for all who touch her fall lifeless at her feet. There come in search of the Lily two Will o' the Wisps, and a handsome youth, who, having lost his father's kingdom, has travelled

[1] Some of the alchemical symbolism has already been traced by Wukadinovic and Lucerna. Neither, however, has perceived any pattern in the symbols.

from a distant country to seek the Lily-maiden's hand. These three are helped in their quest by the Green Serpent, who lives on the side of the river opposite that of the Lily, and by an Old Man, who carries a lamp with miraculous powers. At length the youth finds the Lily-maiden in her garden, but forgetful of her deadly touch he runs to embrace her, and falls in a deathlike swoon. The Lily, the Green Serpent, and the Old Man do their utmost to restore him to life, but as evening draws on and the shadows lengthen all their efforts seem to be in vain.

Meanwhile, a second plot has been developing. The Serpent, on its own side of the river, has long been accustomed to visit an underground Temple, in which it is dimly aware that some great mystery is concealed, a mystery to be understood only with the help of a miraculous potion of gold. When the Will o' the Wisps first arrive, they scatter gold from their wings, and the Serpent, hoping that this is the promised gift, eagerly swallows it and hastens back to the Temple in the bowels of the earth. There it becomes aware of what hitherto it had only surmised. Standing in niches along the walls, and revealed in the light which now radiates from the Serpent's body, are four metal kings: one of gold, one of silver, a third of bronze, and a fourth a mixture of all three. By these the Serpent is initiated into great secrets.

Shortly afterwards, the Old Man appears in the Temple and announces that 'the time has come'. Hitherto, it has been possible to cross over the river only uncertainly and at intervals. Travellers might either use the Ferryman, who, however, would only convey them in one direction; or they might sit astride the shadow of a great giant, who, though impotent to cross over himself, could nevertheless cast his shadow to the other bank at sunset; or they might travel at midday across the arched back of the Serpent itself. Now that the Serpent has learned the secret of the Temple, the Old Man declares, the two banks of the river will be joined for ever by a broad, firm bridge. The Temple too will fulfil an ancient prophecy and stand no longer under ground but by the river's bank.

With these words, the Old Man departs, and the Serpent joins the Youth in his search for the Lily-maiden. But when she is found at last, and the Youth falls fainting at her feet, the Old Man returns. He decides that the Youth can only be restored by

bringing him back to the Temple. The Serpent forms a protective circle about the Youth, until morning breaks, and the whole company, including the Lily-maiden, set out to cross the river. They arrive on the banks, and the Serpent, arching across from side to side, allows the others to pass over its back, bearing the Youth with them. When all are safely across, it joins them and again forms its protective circle about the Youth. But now it feels that its task is almost accomplished, and it resolves to sacrifice itself for his sake. Its glistening skin is transformed into a ring of precious stones, which are taken up and cast into the river. Through this self-sacrifice, declares the Old Man, it will be possible for the everlasting bridge of the prophecy to arise from the waters.

The Youth is now restored to a semblance of life, and together with the Lily, the Old Man, and the Will o' the Wisps, he descends into the underground Temple. Suddenly the earth appears to shake, the Temple rocks, and begins to move towards the river. As it passes beneath the stream, water seeps through the dome, but soon the Temple begins to rise, and appears miraculously unharmed by the bank of the river. One half of the prophecy is fulfilled. The Youth and the Lily-maiden, now called King and Queen, are united, and there is general rejoicing. But looking out from the Temple they see that the bridge too has now appeared, in great splendour, and broad and strong enough to support a gay throng of people who pass with ease from one bank to the other. 'All honour to the Serpent!' cries the Old Man, 'for to it you owe your life, and your people owe to it the bridge.' The pillars on which the bridge rests are founded on the jewels, the sole remains of the Serpent's body, which were cast into the stream. A heavenly light descends now on the happy King and Queen, and the people fall on their knees before them. Only two events mar the joyful celebrations. First the Giant, awakening from his morning sleep, stumbles along in amazement, and causes for an instant great havoc on the bridge as his fists sweep about this way and that. But he is quickly turned to stone and does no more harm. Then the Will o' the Wisps, irresponsible and puckish as ever, return to scatter their gold among the crowd, which forgets its adoration and clutches greedily at the proffered riches. But soon they grow tired of

their sport, and go their ways; 'and to this day the bridge is thronged with travellers, and the Temple is the most frequented in all the world'.

Like a good many fairy-tales, this has the almost essential elements of a quest, and a task fulfilled. But it differs from the general run in that its meaning has not been obscured by the glosses of later narrators. It is fashioned at the source, and its obscurity is not due to the modifications of tradition, but to Goethe's own desire to retain the sense of mystery. The nature of the quest in the *Märchen* is however not hard to define. There are in it two symbols of achievement, the union of the Youth with the Maiden, and the bridging of the river, which are typical of Goethe's whole philosophy. They surely express once again his desire to unite the divided opposites, and his belief that such separation and reunion is present throughout all Nature. All the stories in the *Conversations of German Emigrants* are indeed meant to illustrate this. 'They treat as a rule', Goethe wrote, 'of the feelings by which men and women are united or separated, made happy or unhappy, but by which they are more often confused than enlightened.' [5] The *Märchen* is one of those in which men and women are united and made happy.

The suggestion has been made, and can, I think, be readily accepted, that the two banks of the river represent the polarity present in all nature. [6] This is so characteristic of Goethe's thought as to need no argument. Seen thus, the banks are indeed a symbol at once meaningful and meaningless. Although no precise allegory can be suggested for either of them, they symbolize every conceivable form of contrast, light and darkness, self and non-self, time before and time after, heavenly ternary and earthly ternary. At times, however, Goethe appears to have had one of these pairs more in mind than another. The black river which divides the two banks sometimes suggests the Styx, so that one thinks of the banks as earth and heaven, or heaven and hell. So also the Ferryman, who can take his passengers only in one direction, recalls the figure of Charon. The river also has the curious power of blackening any human limb which is placed in it. An old woman who dips her hand in it is told that the hand will appear to shrivel and blacken until it is

entirely invisible, although she will still retain the use of it. If the whole body were immersed in this way, perhaps it too would disappear, leaving only a disembodied spirit. So again the river is a river of death. But if the Ferryman is Charon, to cross the river with him is no way of bridging the stream: the banks are not united, the corporeal and the spiritual world remain distinct. Nor is the Giant's shadow any better, for the Giant is a violent, selfish creature, and these qualities make him a poor substitute. Nothing else but a permanent bridge will serve the purpose, and the bridge can only be built by self-sacrifice.

The bridge as a symbol of the union of opposites was in fact known to the alchemists. In Barchusen's *Elementa Chemiae* there is an illustration, which Goethe might well have seen, showing a river in the foreground dividing the picture into two halves. This river is perhaps the 'Hermetic Stream', of which the alchemists often spoke. Above its banks on either side stand the Sun and Moon, and between them, crossing the stream, runs a connecting bar to symbolize their conjugation.[1] The sudden appearance of the bridge in Goethe's tale is also heralded by just this marriage of male and female. The Youth and the Lily-maiden, whose union brings the climax of the story, are the King and the Queen of all the alchemical allegories. The name 'Lili' or 'Lilie' was one often given to the Stone, or to its female part. 'The matter of the Tincture, then', wrote Paracelsus, 'is a very great pearl and a most precious treasure, and the noblest thing next to the manifestation of the Most High. This is the Lili of Alchemy and of Medicine.' [7] Starkey speaks of 'an exquisite fineness, and transcendent brightness, which is our Lilly Candent', [8] and says: 'Then shall thy Elements perfectly accord, and one colour shall cover thy newly-married Soul and Body, and that will be like to the most pure Lilly, or sublimed Salt, sparkling like to a new-slipped Sword in the Sunbeams.' [9] Faust himself speaks of the Lily as the female metal when he describes the experiments of his father:

> Da ward ein roter Leu, ein kühner Freier
> Im lauen Bad der Lilie vermählt.

With her deadly touch also, the Lily-maiden has some affinity with the Lili of alchemy, for the Elixir of Life was often said to

[1] See the illustration in Read, *Prelude to Chemistry*, plate 22.

be a strong poison. Further discussion of this point must however be reserved till later.[1] The Youth, on the other hand, is the King's son, and later the King, in whom the alchemists often symbolized their male principle or philosophical gold. He wears about his shoulders a purple mantle—of Sol, as Basil Valentine might have added—and his one desire is for union with the Maiden. He has, he says, lost all, even himself, for love of her, and must live in torment till he finds her. 'Shall I still pass to and fro', he cries, 'and tread the wretched circle backwards and forwards across the river?' To escape the torture of this cyclical movement he casts himself into the Lily-maiden's arms, and dies. A little later, the Maiden's veil begins to radiate a soft light, 'which, like some tender dawn, coloured her pale cheeks and her white robe with infinite grace'. The first tinge of red appears, suffusing the white with the hue of its future glory. Later still, when all the dangers are overcome, and the Youth and his blushing Maiden stand united as King and Queen, the transformation is complete. 'She had cast off the veil, and her cheeks were coloured with the most beautiful, most imperishable red.' A heavenly gleam descends on the joyful couple, and the people fall on their knees in worship. The delicacy of this 'chymical wedding' is far removed from the crudities of its alchemical models.

In the events which lead to this happy goal, Goethe has fashioned his symbols with equal care. The story of the Green Serpent links through most of these. In its very first act, when it swallows the gold scattered by the Will o' the Wisps, the Serpent brings us into the region of alchemical symbolism. The gold must surely be the *Aurum Potabile* of Paracelsus, which was for Fräulein von Klettenberg the source of great enlightenment and joy. As soon as the Serpent has swallowed the gold, its whole body becomes lucent and transparent. Everything about it seems more brilliant, the green leaves of the plants turn to emerald, the flowers are transfigured, and by means of this new radiance it understands the secrets of the underground Temple. Hastening to find the origin of this treasure, it meets with the Will o' the Wisps, who had scattered the gold from their wings. In these creatures, one might expect to find some resemblance

[1] See p. 226 f. below

to the alchemists themselves.[1] This is suggested by their very name, 'Irrlichter', or erring lights. The Serpent's attitude towards them is just that of Goethe towards his early teachers. They are in possession of the key to knowledge, and they too are in search of the Lily-maiden, but they are incapable of using their knowledge. They speak in 'an unknown tongue', and fritter away their treasure by their frivolity. When the Serpent offers to carry them over the river on its back, they decline, since this would only be possible at midday, a time when they prefer not to travel. They prefer, it seems, to court the night with its mysteries. To find them, the Serpent is obliged to crawl through marsh and fen, and when it does come upon them they mock at it. They admit a certain family resemblance with the Serpent, since they are engaged on the same quest, but they themselves, they proudly declare, are 'of the vertical line'. This they demonstrate by 'sacrificing all breadth', and contracting their tiny bodies into thin pointed flames. At these words, the Serpent feels very ill at ease, 'for however high it held its head, it felt that it must stoop to earth again in order to advance'. All this is typical of Goethe's attitude towards the alchemists. Almost from the start he disliked their secretiveness, and probably their boasting too. It was always his intention to develop their obscurities more logically, and the plunge into their murky pages must have appeared to him as an adventure in the swamps of irrationality. On the other hand, he may have envied them the ease with which, freed of all need for logical thought, they could let their fancies fly away with them at will. They were concerned solely with heavenly things, where, as in the upper part of the flowering plant, 'all breadth is removed'. [10] For his part, he was fettered to the earth, to the more difficult path of empirical criticism and objective fact:

Hebt er sich aufwärts
Und berührt
Mit dem Scheitel die Sterne,
Nirgends haften dann
Die unsichern Sohlen,
Und mit ihm spielen
Wolken und Winde.

[1] Wukadinovic interprets the 'Irrlichter' as alchemical Quicksilver. (*Goethe-Probleme*, pp. 35-67). His sole ground for doing so is that they 'precipitate gold'.

He was at once repelled and attracted by these erring lights, who alone could unveil the secrets of the Temple. They flattered his highest hopes, but disappointed him by their leap from the possible to the real.

Leaving the Will o' the Wisps to their search for the Lily-maiden, the Serpent now enters the underground Temple. Hitherto, it has only been able to feel the presence of the mysteries it contains by the sense of touch. It has felt the four kings without being able to see them. But now, enlightened with the wisdom of the alchemists, it desires to become acquainted with all these secrets through the sense of sight. 'All these experiences it now wished to muster with the eye, and to confirm those things which hitherto it had only surmised.' Here again one thinks of Goethe, for the whole aim of his scientific work was to reveal to the eye the objective reality of his hitherto subjective convictions. He always began with the alchemical symbol, and its crude natural analogies, and sought an analogy more in keeping with the observed facts of the external world. In this way he hoped that he, and the reader also, would be able to see the truth concretely, without romanticizing it:

> Dass du schauest, nicht schwärmst,
> Die liebliche volle Gewissheit. [11]

So also the Serpent now hopes 'to illuminate this wonderful subterranean vault and become fully acquainted with these strange objects'.

Creeping through the cleft in the rock by which the Temple is reached, the Serpent now finds the four metallic Kings, and holds with them a curious conversation:

> 'What is more splendid than gold?' asked the King.
> 'Light,' answered the Serpent.
> 'What is more refreshing than light?' he asked.
> 'Speech [das Gespräch]', it replied.

Here the same line of thought is continued. Wisdom itself is valuable, and was possessed by the alchemists in symbolical form, as the Will o' the Wisps possessed gold. But gold is not so valuable as the illumination it imparts to those who, like the Serpent, can make proper use of it. More valuable than either gold or light, however, is the poet's gift of speech, with which the

light can be communicated to others. The symbols, Goethe might have said, need first to be believed, then understood with reference to the world of reality; and finally this understanding must be made available to others in an intelligible form. Such was the course of Goethe's development from his studies with Fräulein von Klettenberg, through Swedenborg and Lavater to the concept of the Urpflanze. The Serpent follows a similar path.

After the scene in the Temple, the Serpent goes off to help the Youth in his search. As it proceeds, it is of course approaching the moment when it must sacrifice itself in order that the bridge may arise, although it is not yet aware of this. But true to the pattern of development described in the *Metamorphosis* essay, it first undergoes a transformation, as the leaves on the stem were first purified and perfected before entering the wheel of the calyx. Formerly, when it formed its arch across the river, its skin had gleamed with jasper and opal. Now, when it assists the Youth to pass over, it dazzles him with the splendour of emeralds and chrysoprase and chrysoliths. The Youth, and an old woman who accompanies him, have never seen the arch in such glory, 'for they did not know the change which the Serpent had undergone'. Later still, it astounds all who see it with its shining glory of precious gems. So the Serpent ennobles itself as it prepares for death.

As the story unfolds, the pattern of the Urpflanze still weaves its way through. The Serpent next accompanies the Youth to the garden of the Lily-Maiden. There it sees him, enraged at the attentions which she pays to a pet dog, rush to embrace her, and fall lifeless at her feet. The Maiden stands horrified at the death of her lover. But the Serpent plans to save the Youth, and staves off 'the most fearful consequences' by forming its protective circle around him. 'It wound its supple form in a wide circle around the corpse, seized the end of its tail between its teeth, and lay motionless'. It forms the true alchemical symbol of death and rebirth, the wheel without beginning or end, represented in the Urpflanze by the calyx. But in the fairy-tale, Goethe uses the symbol without disguise. This is the *Ourobouros* which appears on the frontispiece of the *Aurea Catena*, and which is perhaps as old as alchemy itself. Almost any illustrated alchemical work would provide examples of it in

profusion. It is referred to also by Welling, in a riddle describing the process of the Stone. The adept, he says, is to take a snake, such as may be found in the green fields, and place its head to its tail in a circle. The head will now grow hungry and eat the tail. 'At last,' he says, 'you will see that the serpent will become pregnant of itself, and will give birth to the noble Child of Heaven, of male and female sex, which the Kings on earth seek to worship.' [12] In the same way, the Green Serpent of the *Märchen* is to sacrifice itself, and so enable the new-born Youth to step out from its protective circle and marry the Lily-maiden. In seizing its tail between its teeth, the Serpent begins the act of self-destruction, which, according to the alchemists, was necessary before the final state of identification with the whole could be achieved. 'Let each do his duty', says the Old Man, 'and a general happiness will dissolve in itself all individual pain, as a general misfortune consumes individual joys.' The Serpent is preparing the way for this blissful future state, and though it fears that 'putrefaction' ('Fäulnis') will break through its magic circle, and destroy the youth completely before its work is done, the sight of an eagle with 'purple-red' wings seems to be a happy augury.

The encircling serpent represents, however, not only death but also rebirth. Hitherto only the Youth has died, now the Serpent must die also in order to restore him to life. It therefore sets off towards the river, twisting about in great rings as it goes. The Old Man follows, bearing the dead Youth. Now for the last time the Serpent forms its great arch across the stream, and as it does so it reaches its highest degree of beauty and perfection. Before, when it had borne the Old Woman and the Youth across its back, it had seemed so splendid that the Old Woman had thought the prophecy of the bridge fulfilled. But the Lily-maiden reminded her that the bridge must be strong and broad enough to carry not only people, but also horses and carriages. Not only this, but great pillars must arise from the stream to support the arch. Now, as the Serpent crosses the river, it fulfills for an instant almost the whole purpose of the everlasting bridge. 'Aloft, the bright circle stood out sharply against the dark sky, but beneath *vivid rays quivered and flashed towards the centre*, and revealed the supple firmness of the structure.' [13]

This is unmistakably the 'suddain, miraculous coruscation' of Thomas Vaughan, in which 'the Divine Spirit hath so swallowed up the body that it is glorified like the Sun and Moon in their splendour'.[1] It also recalls again the allegory of the *Chymical Wedding*, in which the sun's light was concentrated from all sides, and 'beat upon the whole golden Globe hanging in the midst'. This was the overwhelming experience which Goethe saw repeated when he looked at the radiating spokes of the calyx: a living concentration of all forces towards one point, the birth of a spark of new life, the first joyful recognition of the 'centre'. The arrangement of the sepals about the central stem represented not only the wheel or circle of the alchemists, but also the discovery of the purified seed, the tinge of red, which was to develop until, prevailing, it subsumed all contrast. In this way, the Serpent makes possible the union of Youth and Maiden and the bridging of the stream.[2]

Its task almost accomplished, the Serpent sways across to the further bank and forms its protective circle about the Youth once more. The Old Man bends down and asks: 'What will you do now?' The Serpent's answer perhaps reveals something of Goethe's own state of mind when he left everything and escaped to a new life in Italy. 'I will sacrifice myself, before I am

[1] See p. 27 above. I do not mean to suggest that Goethe had read Vaughan, but that this is a common alchemical symbol, of which Vaughan provides one of the best examples.

[1] Thomas Mann uses the symbol of the circle with similar import in *Der Zauberberg*. Hans Castorp is introduced by his friend Naptha to alchemical doctrines, and especially to the frequent symbol of the grave. (Stockholm edition, 1946, II, 253). This follows on his own 'crucial' experience, when he becomes lost in the snow on a skiing expedition. '*Es war das Nichts*, das weisse, wirbelnde Nichts, *worein er blickte*' (II. 210). In his efforts to regain his path, he unintentionally travels in a circle and returns to his starting-point. 'Wenn auch aussen verklammt, *habe ich doch innerliche Wärme gesammelt*, bei der Bewegung, die ich gemacht, und so war die Exkursion nicht ganz nutzlos, *wenn ich auch umgekommen bin* und von der Hütte zur Hütte geschweift. . . . "Umkommen", was ist denn das für ein Ausdruck? Man braucht ihn gar nicht, er ist nicht üblich für das, was mir zugestossen, ganz willkürlich setze ich ihn dafür ein, weil ich nicht so ganz klar im Kopf bin; und doch ist es in seiner Art ein richtiges Wort, wie mir scheint.' (II.218). My italics throughout.

G. K. Chesterton amused himself with the same symbol at the end of his novel *Manalive*. 'Mr Smith' sets out on a rejuvenating expedition in which he travels round the world and back to his starting-place—in a pair of *red and white* pyjamas!

sacrificed', it replies. Its gleaming skin is transformed, and nothing is left but a ring of precious stones, which the Old Man casts into the river. Now the Youth is restored to life, and steps forth from the circle. The new man has been born, and from now on, the thread of the story is maintained not by the Serpent, but by the progress of the Youth towards his marriage with the Lily-maiden. The Youth has taken the place of the Serpent, and continues both its life and his own on a higher plane.

But although the Youth is now revived from death, he is not yet fully restored to life. In this he resembles, as will be seen, the alchemical homunculus.[1] He looks about him with open eyes, but sees nothing, for 'the spirit had not yet returned'. As Boehme wrote: 'Before the marriage with the maiden, the heavenly being of the youth lies wrapped in death.' [14] Only when the Temple has passed beneath the river and the Youth is united with the Maiden is the final stage of perfection reached.

This brings us to the other half of the prophecy, that the Temple will stand by the side of the river. I can suggest no good reason why it should move to this precise spot, unless perhaps it is to signify its triumph over death. But in order to arrive there at all it must rise to the surface, and here once again the symbols of the alchemists may make the meaning plainer. When the seed of the metals had been uncovered, it was said to grow until it had transmuted into gold all surrounding imperfections. In the same way, the tinge of red in Goethe's colour-theory was developed and heightened until it prevailed. In the *Märchen*, the death of the Youth has brought the first red flush to the Maiden's cheek, and, with the death of the Serpent, the new centre of life has now begun to grow. The seed or centre or tinge of red has now become the rejuvenated Youth, who steps out of the magic circle. But before the spirit returns to him, he must first enter the underground Temple. There the final stages of his development take place. The Temple, with the Youth within, rises to the surface, and so brings up from the unconscious depths the spark of new life. Goethe's symbol may be compared with the lines of Evelyn Underhill, already quoted, in which it is said that the mystic seeks to 'include this spark within the conscious field, bring it out of the hiddenness, from those

[1] See pp. 215, 218 below.

deep levels where it sustains and guides his normal existence, and make it the dominant element around which his personality is arranged'.[1] This involves, she continues, 'the emergence from deep levels of man's transcendental self'. [15] The famous alchemical acrostic, which concealed one of the many names of the secret 'matter', perhaps also bore this meaning. 'Visita interiora terrae, rectificando invenies occultum lapidem' is a motto to be found repeatedly in alchemical literature. Both the Serpent and the Youth have visited the bowels of the earth, and now the hidden seed rises into the conscious sphere. The Stone is made, the banks of the river are joined, the King and the Queen are united in marriage.

Together with the Youth also rise the four kings of the Temple. Three of these are alchemical metals, gold, silver and bronze, and each perhaps corresponds, like the three constituents of granite, to the three Persons of the Godhead. The first is power ('der gewaltige König'): he wears a wreath of oakleaves, with which he crowns the Youth when his quest is ended. The second has a suggestion of femininity: he is, in contrast to the squat form of the Golden King, somewhat delicate and slightly built. He is also a Christ-like figure, for he adds to the gift of the Golden King's wreath the counsel: 'Feed my sheep.' The third is 'the mighty King': he leans upon his club, and girds the Youth with his sword. When these three rise with the Youth, they perhaps symbolize also the triune perfection of the Stone. 'Our Elixir', wrote Starkey, 'is . . . a drawing forth the Tincture out of our dissolved Bodies; which doth cause our dead Body to rise . . . until an intire Triptative Union be made of Body, Soul and Spirit.' [16] Thus the final stage of the *Märchen* includes not only the union of opposites but also the complete integration of all three attributes of man.

The three kings may however have had a more far-reaching significance than this. The three metals and the fourth 'mixture' are mentioned for example in the *Book of Daniel.* Called by Nebuchadnezzar to interpret his dream, Daniel said:

Thou, O King, sawest, and behold a great image. This great image, whose brightness was excellent, stood before thee, and the form thereof was terrible. This image's head was of fine gold, his

[1] See p. 28 above.

breast and his arms of silver, his belly and his thighs of brass. His legs of iron, his feet part iron and part of clay. [17]

The image represented four Kingdoms which should rule successively on earth, until a new Kingdom should arise, which should never be destroyed. Goethe may well have had this story also in mind when he wrote the *Märchen*. He may also have noted the idea of a recurrent historical cycle of gold, silver, bronze, and iron ages in the work of Giambattista Vico, which he read while in Italy. [18] Vico in turn owed the idea to a similar notion in Greek mythology. Thus the three kings may introduce to the tale a cosmic symbolism, so that the final union represents also a concluding epoch in the history of the world. But it is not possible to assign here any definite source: the symbols occur again and again in all manner of occult writings. The Masonic Temple of Human Love, which includes the attributes of Wisdom, Beauty, and Strength, may also have been intended by Goethe. [19]

The fourth king, on the other hand, does not rise gloriously like the rest. When the Will o' the Wisps enter the Temple with the reborn Youth, they attack the mixed king, and lick out all the seams of gold which run through his body, so that he falls in a shapeless and repulsive huddle. This is in accordance with his nature. As a 'mixture' of the three metals which compose his brothers he is incapable of developing and rising with them, for 'mixture' as opposed to 'integration', is a characteristic of the lower union. He must remain, therefore, within the limits of the earthly ternary. Goethe wrote in similar terms of the 'regressive' metamorphosis of plants, that is, the form of development in which the plant is not propagated by the union of sexes, but by grafting or budding. In such cases, he says, Nature does not hasten forwards to her great goal, 'but seems to flag, and irresolutely leaves her creature in an undecided, feeble condition, which, while it often has some attraction for us, is nevertheless inwardly languishing and ineffective'. [20] Thus the lower and higher unions of the *Metamorphosis* essay and the Colour-Theory are also represented in the *Märchen*.

In the figure of the Old Man and his lamp there is perhaps a suggestion of the Divine Light, and of the Philosophers' Stone itself. The lamp will not shine in darkness, but only in the

presence of another light, such as that cast by the Serpent in its enlightened state. The darkness, so to speak, comprehends it not: it can shine only when the darkness becomes illuminated with a desire for knowledge of the light. In the same way, the Philosophers' Stone could be fully understood only by those who were aware of its symbolical implications. Some belief in, or knowledge of God was essential if the alchemist was to make any sense at all of the obscure texts he read. The resemblance between the Old Man's lamp and the Stone goes further than this, however. When no answering light is present, the lamp transmutes all about it into a higher degree of perfection. Under its influence stone becomes gold, wood becomes silver, dead creatures are transformed into precious gems. Metals, however, it destroys. This is, it is true, sufficiently removed from the nature of the Stone to make the alchemical symbolism not immediately obvious. Goethe does not speak precisely of the transmutation of metals. But throughout the story the language of the alchemists is lightly concealed in just this way, and the essential feature of transmutation is still present. So also is the reduction, by the Stone, of all metals to their first matter. Thus the lamp hints that while the Stone may be fashioned by men, it is still eternally present throughout the operations. Men may achieve a godlike harmony but the harmony is eternally existent in the divine nature.

The story of the Old Man's wife, the Old Woman, also suggests an alchemical symbol. When she is unable to pay the Ferryman his dues, she places her hand in the river as a pledge of faith. It at once turns pitch-black, and grows increasingly smaller and more invisible as the story proceeds. Only at the end, when the Temple has risen to the surface, is she persuaded to bathe her whole body in the river, when, instead of becoming completely black, as she fears, she is restored to the full use of her limb. Yielding herself utterly to the river the Old Woman is granted a fuller life. In this, there is perhaps a trace of the process of 'Nigredo', symbolized in the Colour-Theory by the increasing darkness of the developing colours. Not only the Youth and the Serpent, but the Old Woman also contributes by this renunciation to the final perfection. She has 'confessed her guilt (Schuld)', but now, as the Old Man declares, all sins are

removed ('alle Schulden sind abgetragen'). And she does not merely regain the use of her hand, but appears at the concluding festivities restored to youth and beauty. The Old Man too is miraculously rejuvenated. So the creation of the Stone brings with it once again a second youth. The Old Man pledges himself anew to the Old Woman, and their re-marriage joins and strengthens the wedding of the Youth and Maiden. In the words of *The Zohar*, 'the upper world is not stirred to act until the impulse is given from the lower world'. [21]

Finally, two other characters need mention, although they seem to have little relationship to alchemy. The first of these is the old woman's dog, the Mops, which is killed by the gold of the Will o' the Wisps, transformed by the Old Man's lamp into a precious stone, and at last restored to life by the Lily-maiden. There is a touch of curious humour in this quaint figure, which scarcely plays any important part in the story. There were, however, certain secret societies in eighteenth-century Germany which for some fanciful reason paid homage to these creatures. They were known as the 'Brotherhood of Mopses', and in their rites, according to the historian of magic, Eliphas Lévi, 'the mysteries of the Sabbath and the secret reception of the Templars were renewed in mitigated and almost humorous forms'. [22] Goethe at one time belonged to what he calls a 'comical mystical society', while he was staying at Wetzlar, and may possibly have come across this eccentric tradition there. [23] The point is a trivial one, however, and is not likely to throw any light on the story.

The Giant presents something more of a problem. As is generally assumed, he undoubtedly represents the unleashing of elemental forces, the uncontrolled savagery and power of unreflecting Man. On the other hand, the manner in which he conveys travellers across the stream suggests a somewhat different meaning. They cross over in fact on his neck, or rather on its shadow, which recalls that other giant, in *Wilhelm Meisters Wanderjahre*, St Christopher. In the old legend, he too conveyed a traveller, the Christ-child, on his neck over a stream. But this parallel still seems to throw no clear light on the significance of the Giant. Perhaps it is worth commenting, however, on the way in which, at the end, his wild violence is

tamed. In the midst of his uncouth lunging he is transformed into 'a colossal statue of gleaming reddish stone' and his shadow serves from now on to mark the hours on a ring of curious figures standing round him. The young king is pleased to see that he has now been turned to good account. But there is in this transformation a clue to Goethe's meaning—an extremely esoteric meaning, to be sure. The reddish stone is almost certainly granite, which Goethe always described in this way. It also perhaps suggests the redness of the Philosophers' Stone. Goethe had moreover seen a granite obelisk in Rome fulfilling just this function of a sun-dial. [24] Did the idea then occur to him that here the primaeval chaos of elemental confusion had reached its limit in the perfect integration of the red stone, and was now ordered and stilled in the service of man? If so, it may have recurred to him as he wrote the *Märchen*. The Giant may have represented to his mind the image of elemental fury, transformed at the last moment into a triune, harmonious whole.[1]

The meaningful and meaningless pattern of the *Märchen* is now traced through. It has no particular reference to any set of events, but represents the pattern which Goethe believed to exist throughout Nature. One might interpret it in terms of the Urpflanze, for example. It contains the same ideas of purification, rotation, death, and reunion on a higher plane, the same 'lower' and more ineffective union. It might also be compared in the same way with Goethe's Colour-Theory. In certain respects, it even corresponds to the pattern of a part of *Faust II*, as will appear later.[2] As Goethe believed, it is just such a tale, 'based on a suitable natural foundation', as he at one time proposed to write. It is a refashioning of the allegories contained in such stories as the *Chymical Wedding* of Christian Rosencreutz.

The *Märchen* belongs to a genre scarcely known to the literary historian.[3] The alchemical allegories are almost all crude and

[1] There is perhaps some occult tradition corresponding to this transformation of the Giant. Blake, in a passage presumably based on a Cabbalistic interpretation of Scripture, writes: 'Lot's Wife being Changed into a Pillar of Salt alludes to the Mortal Body being render'd a Permanent Statue, but not Changed or Transformed into another Identity while it retains its own Individuality' (*Last Judgement*).

[2] See Ch. IX below.

[3] Cp. however, W. B. Yeats' *Rosa Alchemica*, and Klingsohrs Märchen in Novalis' *Heinrich von Ofterdingen*.

badly written. Only in very rare instances do they convey a dreamlike quality which betrays the presence of a personal experience.[1] In such cases, the allegories have some claim to be considered as literature, since they attempt to convey in symbolical form the nature of unconscious life. But for the most part they are mechanical translations of the symbolical *Magnum Opus* into story-form. They have no literary merit, and seem to derive not from any personal experience but from a desire to make the process even more mysterious. Goethe's story presents quite a different case. It is true that it is so heavily encrusted with the gems of alchemical lore that much of it is quite unintelligible to anyone unacquainted with alchemical writings. The deepening flush of the Maiden's cheek suggests nothing at all, unless it is related to its alchemical context. It may be argued that wherever Goethe adheres so closely to his alchemical sources, the tale loses in artistic value, and that he succeeds best when he is able to transmute his symbols entirely into poetic images—as he did frequently in *Faust*. But within the conventions, the *Märchen* naturally enough dwarfs all its forerunners. Goethe introduces to this form of story-telling qualities of balance, structure, and characterization which it never knew before. The restrained, good-humoured irony with which it is written serves only to increase the power of such images as the Serpent's bridge with its flashing rays, and the luminous irradiation of the Serpent's body as the precious gold takes its effect. If Goethe's science reaches the zenith of alchemy, his *Märchen* is the unrivalled ruby of alchemical allegories. It represents, however, the sole example in literature of Goethe's systematic re-adaptation of alchemical symbolism. In his other literary works, while such symbols can still be traced, they are rarely used so openly and consecutively as in the *Märchen*.

[1] E.g. the allegory in *The Hermetic Museum Restored and Enlarged*, London, 1893, vol. I, pp. 41-50. Cp. the commentary in H. Silberer, *Probleme der Mystik*.

CHAPTER VIII

CENTRE AND CIRCLE

'THE difference between Goethe's writings and those of most other men of letters', writes Barker Fairley, 'is that wherever we touch him, in a lyric, or an epigram, or a novel, or a drama, or an essay, or a review, or a scientific monograph, or even in a letter, we cannot, unless we are indifferent to him, leave it at that, but are gradually, insensibly, involved, led on, started on a journey; and the journey, we find, though not a day's or a year's journey, but rather that of a lifetime, always points or leads to the common centre of experience in his mind and person, from which the whole of his immense production seems to radiate. It is this reference to a centre which gives Goethe's works their peculiar, their specifically Goethean character.' [1] Later, Professor Fairley adds: 'This imagery of centre and circumference was clearly what he needed to describe the working of his mature mind because he used it so flexibly.' [2] This feature has been remarked by other recent critics. Gundolf speaks of Goethe's work as a sphere, in which the individual parts are radiating lines. [3] Leisegang seeks to define his thought as 'circular', in contrast to the 'linear' thought of more logical thinkers. [4] The preceding chapters have shown how all these images of centre, circle and circumference were closely linked in Goethe's mind both with one another and with their alchemical origins. In this chapter and the next it will be possible to trace the use which Goethe made of these images in the conduct of his life and thought, and to see how the inner solidarity which he achieved was a direct result of his early studies in alchemy.

One of the first occasions on which Goethe used the age-old symbol of rotation to express despair at the transiency and impermanence of things is to be found in his letter to E. Th. Langer of 29 April 1770. This is the letter in which he speaks of his enthusiasm for alchemy, and in particular for the Emerald

Table of Hermes Trismegistus. In the sentimental style of his day, he asks: 'How is it with you now, dear friend? From your last letter you are not content. You are too far removed from the centre of your world to be still, and till now your fate has been to travel round like the rim of a wheel, always turning, always moving, and as near to the axle at the end as at the beginning. And with all that, to have a loving heart! Wretched man!' [5] It is reasonable to suppose that Goethe owed this image at least to some extent to the alchemical authors who were at this time his constant study. Welling, and the mystic Louvigni too, frequently spoke of the 'centre of rest'. Yet already Goethe uses the metaphor not to represent the indwelling God, but to define any state of peace. With his family or his friends, Langer will be content, he will have found a stable centre; so long as he is away from them he is bound to the movement of the wheel. Other examples of the same symbolism are naturally not difficult to find, though none of them are specifically alchemical in origin. The turning wheel is a natural image of discontent and misery, such as might be found in any author. But Goethe uses it, as I hope to show, more frequently, more consistently, with greater elaboration and greater symbolical effect than others.

The mental tumult of these years of Storm and Stress, the years in which Goethe produced *Werther* and *Götz* and *Faust*, is well-known. For a considerable length of time he was completely unable to control the upward surge of his life. 'My impulse forward is so strong', he wrote, 'that I can scarcely make myself pause for breath.' [6] His friends were apt to describe this overpowering urge in terms of the growing plant. Jacobi writes, in 1774, that Goethe is like one possessed, almost never able to act on his own free will. 'I do not wish to imply', he continues, 'that no change for the better is possible in him, but it is only possible in the same way that a flower unfolds, a grain ripens, or a tree grows towards its crown.' [7] Goethe was carried forward in a breathless rush which gave him no time for reflection or peace of mind. Even at Weimar, where the seeds of his classical detachment began to develop, he was still in despair at the storm of events in which he found himself. 'The whirl of earthly things', he noted in his diary, 'as well as all manner of vexatious personal feelings, have given me no peace. It will not

do to write down these inward emotions.' [8] Wilhelm Meister, in the version of the novel written in the early 'eighties, tells Mariane that there are no words to express the wheel which is turning in his heart ('für das Rad, wie sich's in meinem Herzen umdreht, sind keine Worte'). [9] The phrase is echoed in the lines of Iphigenie, who cries:

> Es wälzet sich ein Rad von Freud und Schmerz
> Durch meine Seele. [10]

The wheel is thus one of the many similes with which Goethe expresses his bondage to the rhythm of change and succession.

At the same time, however, he is seeking release from the wheel's movement. In the early 'eighties, the theme of resignation and renunciation begins to dominate his thoughts, a theme elaborated to its fullest extent in *Iphigenie*, *Tasso*, and the last books of *Wilhelm Meisters Lehrjahre*. Oppressed with cares of State he writes, in his diary of 1780: 'Only he who completely denies himself is worthy to rule and able to rule.' [11] The best sign, he continues, is the profound peace with the world in which he lives, a peace which is continually growing. [12] Together with this, there was of course his increasingly objective attitude, entailed by the care of the ducal estates, which was shortly to result in his first contribution to science. He is able to step back from time to time and observe his own development, although he is still unable to check its upward rush.

The desire for peace was, however, present much earlier. In 1775, in a mood of optimism, Goethe had written to Herder to say that a period of liberation was possibly in sight. This again was couched in terms of the symbolical rotation. 'It seems,' he writes, 'as though the entwined threads on which my fate depends, and which I have been twirling out and in with a rotating oscillation for so long, are at last about to knot together.' [13] In the following year, he speaks of being in an infinitely pure condition, feeling neither joy nor pain—'Ich bin in einem unendlich reinen Mittelzustand ohne Freud und Schmerz'. [14] But the optimism is short-lived and variable. Within a few months of his letter to Herder he is in despair again at his inability to find a firm foothold: 'Either clutching and grasping at a single point, or swaying to the four winds!' [15] He needs

a central point to which he can refer all the variety of experience which floods over him; when he finds one he clings to it in desperation, but soon relinquishes it, perceiving its inadequacy, and finds himself at the mercy of every eddy. The scientific work now beginning proceeds on similar lines; there must be some single point of reference, which, however, he is unable to find. 'The point at which all the variety of things is united remains a secret.' [16] Again, referring to his efforts at understanding the laws of geology, Goethe writes: 'Everything must eventually come to a point—but firm patience, a steadfast perseverance.' [17] But this search for a point of reference did not only apply to the external world. His inner life required the same stability, and it was in terms of envy that he wrote of Brutus in his contributions to Lavater's *Physiognomy:*

> Mann verschlossener That! langsam reifender, aus tausend Eindrücken zusammen auf Einen Punkt gewürkter, auf Einen Punkt gedrängter That! [18]

Like the plant which Goethe was later to describe, Brutus ripened slowly until his powers were all crowded round one point, or at least, so Goethe liked to imagine him. This was in fact Goethe's conception of all genius, genius 'from whose soul the parts appear, grown together in an eternal whole'. [19] And the desire for such a concentration of his forces seems at length to have become essential to his existence. Passing through a pleasant landscape, he writes to Frau von Stein that he seems to be in the Elysian Fields, 'everything flows into everything else, there are no heights to attract the eye, or to excite the desire for a single point, one wanders about without asking whence one comes or whither one goes'. [20] So long as he is at peace, the desire for the single point is stilled. So natural does this seem to him that the words have become an accustomed phrase, which he jots down almost without thinking, certain that his meaning will be understood.

During this period also, Goethe is constantly aware of an increasing purification and perfection. His favourite means of expressing this is the image of the serpent with its cast-off skins, or of unfolding husks or scales. His letters to Frau von Stein constantly record this sense of progress. His former

literary work appears to him in 1779 as so many cast-off snake-skins. [21] A year later, he rejoices to find that he is 'drawing closer to everything good and permanent', whereas 'the rest' falls off daily like shells and husks. [22] But with the variable moods to which he is subject at this time, it is not long before he cries: 'O Lotte, how many skins must one cast off; how glad I am that they gradually grow looser, but yet I feel that I am still held fast by some of them.' [23] The outward shell must go if he is to be safe: 'man has many skins to throw off before he can be sure to some extent of himself and of the world.' [24] As late as 1787, he is still 'casting off new shells every day', and hopes to return from Italy a true man. [25] In a similar fashion, he compares his moral state, in a letter to Jacobi of 1782, to an iron which has been plunged in the fire and beaten with a hammer to remove its impurities. 'It seems', he says, 'as though just such a mighty hammer was needed in order to free my nature from its dross and to temper my heart. And how much, how much impurity still hides there within!' [26] All this was a necessary preparation, as he felt, for the final blossoming of his genius. As he wrote at the turn of the century, in the *Weissagungen des Bakis:*

> Lang und schmal ist ein Weg. Sobald du ihn gehest,
> so wird er
> Breiter; aber du ziehst Schlangengewinde dir nach.
> Bist du ans Ende gekommen, so werde der schreckliche
> Knoten
> Dir zur Blume, und du gib sie dem Ganzen dahin. [27]

He had entered the narrow path, which grew broader as he trod it, but the old skins littered the way. At last, he hoped, the 'terrible nodes' on the stem of the plant, in which the purifying stages of his development were also symbolized, would give place to the full beauty of the flower; he could give himself gladly to the whole universe.

Suddenly, in the midst of all this striving and dissatisfaction, there appears in Goethe's diary of 1780 a remark which shows him aware, at least for a moment, of the end towards which he was struggling. The objectivity demanded by his professional cares as Minister of the Duchy of Weimar has had its effect on his self-observation, and he writes with considerable detach-

ment: 'I must observe more closely the circle of good and bad days which turns within me. . . . Experience, action, orderliness, everything changes and maintains a constant circle. Happiness, sadness, strength, and elasticity as well. As I am living very moderately, the process is not disturbed, and I must work out in what sequence I move round about myself.' [28] Here the course of events is still characterized as a circle, but Goethe appears to have found temporary release from the torture of its movement. He is still aware of the passing moods of gaiety and sadness, but these he now sees as transient phases of existence, which it is possible to observe, as it were, from an inward fortress of permanence. He speaks in fact of two selves, one of which is still bound to the turning wheel, while the other, at the centre, watches its gyrations unmoved and unaffected. There is a retreat from the periphery to the centre of his personality, and while the emotions which he experiences are still his, he is able to regard them with indifference as mere occurrences which do not affect his fundamental being. This attitude implies a renunciation. Goethe is no longer completely identified with the passions which have hitherto driven him at their will. He has renounced them, not in an ascetic fashion by denying their right to exist, but by ceasing to be concerned at the manner in which they present themselves. Once again, he repeats the idea much later in crystallized form. In the poem *Dauer im Wechsel* he writes:

Lass den Anfang mit dem Ende
Sich in Eins zusammenziehn!
Schneller als die Gegenstände
Selber dich vorüberfliehn! [29]

The external world of objects passes transiently enough, but the subjective world of emotions is equally impermanent. Both must be observed from the inward, permanent self at the centre. But more important, Goethe now joins to this counsel the symbol of the rotating serpent, or something very much akin to it. The 'beginning' must be joined to 'the end', in order to achieve this condition of happy indifference. The renunciation implied in this retreat from circumference to centre is represented by the symbol of death and rebirth. Thus far then, Goethe feels his life developing along lines very similar to that of his ideal plant, and of the *Magnum Opus*. His passionate

upward striving is slowly purified and perfected, the movement of the wheel can be halted, and he can, at times, retreat to the centre of his personality, where the 'desire for a single point' can be stilled.

Until he went to Italy, Goethe was continually subject to changing moods of optimism and pessimism. No sooner has he achieved, as he thinks, a state of peace, than he is whirled off his feet again by the rush of events. Italy becomes for him now a land of promise. As soon as he sets foot there, he begins to speak of himself as a new man. As he wrote towards the end of his stay, his principal intention had been to rid himself of the 'physical and moral evils' which had beset him in Germany. [30] He feels this cure taking place from the moment he arrives in Rome, where he writes: 'Now I am here and at peace, and, it seems, at peace for my whole life. For one may well say that a new life begins, when one sees the whole, which one already knows thoroughly in its individual parts, with one's own eyes.' [31] He is growing aware of 'the whole'—not, it is true, of the whole universe, but of the whole of classical culture, which now begins to fuse together in his mind—and this awareness seems to him like a second birth. During the entire winter his letters are full of the idea. He writes to his mother that he will return home a new man; to his friends in Weimar that he is changed to the marrow; to Herder that he counts a second birthday from the day he arrived in Rome, and that to enjoy the city thoroughly one must be reborn; to the Duke of Gotha and his friend Knebel he writes of a rebirth and a second youth. [32] To Frau von Stein, he speaks of the rebirth which is transforming him from within—'die mich von innen heraus arbeitet'; not only his artistic sense, but also his moral sense, he says, is undergoing a great renewal. [33] In Germany, he had been fighting for very life, and no tongue could express what had been happening within him. [34] Here one thinks of Wilhelm Meister and the wheel which was turning in his heart. Goethe has sought release from this movement by his flight to Italy, and, as he writes to Herder, is seeking to cast off all his former way of life: 'I must admit that I am divesting myself of all my old ideas, and of *all personal will*, in order to be truly reborn and refashioned.' [35] (My italics). His aim is complete renunciation and rebirth

in a higher plane of existence. But as always, his first mood of enthusiasm gives way to sober reflection. So certain was he that Italy meant rebirth that he persuaded himself as soon as he arrived that the miracle had been performed. A few months later he is more cautious, and realizes the essential slowness of his transformation. It is suggested to him that he should complete the novel of *Wilhelm Meister*. He replies: 'May my life develop sufficiently for this, the stem extend in length, and the flowers break forth in greater profusion and beauty. To be sure, it would be better not to return at all, if I cannot return reborn.' [36] Here it seems as though Goethe had the Urpflanze in mind as he wrote. He is not yet ripe for rebirth nor for the new effort which will be required in order to complete his novel. He must develop, the stem must grow on for a time until the stage of the calyx is reached and he can return home with a fresh life, a finer flowering both of himself and of his work.

Italy had now become for Goethe an outward symbol of the inward centre he was determined to find. Only when he saw that all his friends were tied body and soul to the North, and had no desire to visit Italy, he says, did he decide 'to make the long journey alone, and to seek the central point, towards which an irresistible need was drawing me'. [37] For years he had needed to go on this journey, and the desire had become a kind of disease. Classicism for him meant objectivity, and objectivity was the search for a detached centre of reference. But strangely enough, it was not a search without some element of trepidation. From Rome, Goethe had travelled to Naples, and from there intended to go on to Sicily. For some reason, however, it seems that he was almost afraid to go, although the journey was a necessary one, and he might expect to be cured in Sicily of his past ills. The terms in which he describes this double hope and fear are revealing, since he again employs the metaphor of the centre. From Naples he writes: 'The question whether I should travel or not caused me some disquiet during a part of my stay here; now that I am decided, things are better. For my way of feeling this journey is beneficial, and even necessary. Sicily points me towards Asia and Africa, and to set foot oneself on *that strange point, on which so many radii of world history converge*, is no small matter.' [38] (My italics.) That is all the explanation

Goethe offers. But why, it may be asked, should the fact that Sicily had a great historical past cause such hesitation in him—or such enthusiasm? This odd reluctance on Goethe's part has already drawn attention more than once. 'It is highly improbable', writes Humphry Trevelyan, 'that Sicily was of much importance to him as a stepping-stone to Asia or Africa, or as the scene of so much of the world's history. . . . As Meinecke points out, Goethe's interest in a focal point of history of this sort was not purely historical. He derived rather an aesthetic satisfaction from being able "to scan all the roads that once led outwards from such a centre of mighty events into the world around".' But, Mr Trevelyan continues, 'that he undertook the Sicilian journey primarily to taste this pleasure, is obviously impossible. He was seeking a far deeper spiritual experience than this.' [39] Goethe was setting out to discover the spirit of Greece in Sicily. He had already been profoundly moved by the rude grandeur of the temples at Paestum, and feared to encounter 'the quintessence of the southern spirit' in its full glory. Once, however, he had dared the journey, 'his quest would be at an end'. The wholeness of mind which he so urgently desired would be his. To this interpretation one may perhaps join another, not contradictory, but of more general import. Goethe was always deeply influenced by the nature of external objects about him. The Urpflanze was to show the workings of his inward self, his whole scientific work was to be a demonstration of his 'inward way of being'. Sicily then might well appear to him as the final symbol of the wholeness at which he was aiming. The converging radii of world history, like the spokes of the calyx-wheel and the vivid quivering rays of the Serpent's arch, would present him with so overwhelming an image of his ideal that he would be forced with or against his will into a parallel development. To stand in Sicily and feel the whole force of historical events beating against him from all sides would drive him into a similar concentration of his own mental and spiritual forces. For his way of feeling, then, the journey was both necessary and beneficial. But the thought of the transformation he might be obliged to undergo gave him pause. He did not know whether he was ready yet for the wholeness which the Greek spirit would impose on him.

Whether in fact Sicily had this effect, it is impossible to say with certainty. It seems on the whole probable, since Goethe writes on his return to Rome in terms which show that the revolution had been accomplished. 'From many sides', he says, 'everything comes together, so to speak, to *one* point, and I can say that I now see what is to become of me and of my talents.' [40] Here was the final achievement of that goal which he had awaited with steadfast perseverance. Everything *must* come to a point, he had written, and now the prediction seemed to be fulfilled. He was able to regard his condition with a detached and objective glance, and could see what might develop from his present state.

It is not possible, however, to date this achievement with any precision, even if that were desirable. It was largely a matter of mood, so that at one time Goethe would feel confident of having attained his end, and at another would still be searching for it. On his first arrival in Italy he had, as has been seen, been sufficiently carried away by the excitement of the journey to feel that everything had been accomplished. 'The revolution which I foresaw', he had written on 30 September 1786, 'and which is now taking place in me, is that which arises in every artist who remains faithful to nature, and then sees the remains of the great ancient spirit [of classical times]—his soul wells up, and he feels a kind of inward transfiguration, a sense of freer life, of higher existence, lightness and grace.' [41] This image of the soul 'welling up', and the feeling of inward transfiguration reveal once again the nature of Goethe's own metamorphosis. It is as though he were thinking of some subterranean stream coming to the surface, and recalls the underground Temple of the *Märchen*, which rises to the river's bank and restores the Youth to full life. The 'seed' has developed and begun to grow from the self-surrender implicit in the artist's devotion to nature. The outer shells have fallen away, and the fruit presses forth, fulfilling once again a hope which goes back to Goethe's Frankfurt days:

> Voller Keim, blüh auf. . . .
> Und welkt die Blütenhülle weg,
> Dann steig aus deinem Busen
> Die volle Frucht
> Und reife der Sonn entgegen! [42]

This was the nature of what Goethe felt to be his rebirth in Italy: the gathering together of his mental and spiritual forces about a central point, a complete renunciation of his individual will, the development of a seed of wholeness which was to fill his whole frame, and the achievement of inward stability not by the denial of his peripheral emotions, but by the retreat to a centre which held the periphery bound to itself by innumerable radii.

After Italy there is no more talk of finding the centre, it has already been found. Not that Goethe's life was henceforward a bed of roses—the legend of his Olympian calm can no longer be believed, and one has only to think of the *Marienbader Elegie* to see how false the legend is. 'Hier gibt's kein Rat als grenzenlose Tränen' is not the conclusion of a blind optimist. But there there can be no doubt of the greater serenity and harmony of purpose which marked Goethe's middle and old age.

From now on, Goethe uses the symbol of the centre almost as a technique of living, which he applies in dealing with any problem, whether psychological or scientific. 'Of the hundred things which interest me', he told Chancellor Müller, 'there is always one which as chief planet holds the central place, and meanwhile the remaining Quodlibet of my life circles round it in many-changing phases, till each and all succeed in reaching the centre.' [43] In this passage the idea of a spiral approximation towards the centre is evident. In another, it is rather the converging lines of thought which are to gain in power by coming closer together: 'The time must come now, when the broad field is narrowed down again, and the auxiliary sciences direct their efforts towards a certain central point. . . .' [44] Here, as in the calyx of the Urpflanze, there is again a 'contraction' accompanying the reference to a centre. By ceasing to strive each in its own direction, regardless of others, and suffering a limitation of their fields of references to one common centre the auxiliary sciences were to achieve more than they had accomplished hitherto.

This was in fact the argument which Goethe had produced in 1792, in his essay, *Der Versuch als Vermittler von Subjekt and Objekt*, which not only employs the centre-symbol, but also expresses succinctly his whole philosophy of scientific investigation. There are, he says, two methods of observation, the

subjective and the objective. The former is dangerous, since it leads to the establishment of false analogies, and accommodates itself too easily to man's natural desire to discover the relationships between natural things. (He did not, of course, regard his own method as being subjective in this way.) On the other hand the objective method was also open to criticism. While it avoided the danger of twisting facts to suit theories, it was obliged to ignore all the features which make life interesting to men, the qualities of beauty and usefulness were entirely beyond its range of vision. In attempting to eliminate his own personal feelings, which were also a factor in his observations, the scientist inevitably obtained a one-sided picture of the world. He could describe the relationship of plants to each other, but not their relationships to men. Thus, while the self-discipline and care implied in the objective method were valuable in the extreme, the subjective method might supply a useful counterpart. In the subjective method spiritual forces—'Seelenkräfte'—were involved, which were so independent of objective experience as to be in themselves a creative source of knowledge: they had 'eine hohe und gleichsam schöpferisch-unabhängige Kraft'. The problem was, therefore, not to ignore the relationships between all natural things, of which man was subjectively convinced, but to establish those relationships with the utmost objectivity. As Goethe wrote elsewhere, no human powers were to be ignored, either in artistic or in scientific work: 'The depths of intuition, a steady observation of the environment, mathematical profundity, physical exactitude, the greatest possible use of reason and shrewd understanding, together with a nimble, ardent imagination and a passionate enjoyment of sensual things—none of these can be dispensed with.' [45] In order to obtain a picture of the whole, the whole man must be used. And this wholeness, this bridging over of the gap between the subjective and the objective methods, was to be achieved by experiment. Experiment was to be 'the mediator between subject and object'.

But the experiments were to be of a certain kind. Here the symbol of the centre begins to emerge from Goethe's thought. It was not sufficient, he said, for each investigator to tackle the problems of Nature as the fancy moved him. 'Only the interest of a number of people directed to *one* point is in a position to

produce anything worthwhile.' [46] In order to do this, there must be an end of envy, and the immoderate desire to handle a problem after one's own fashion. Thus again, concentration on one point implies not only objectivity, but also a renunciation of purely personal desires. Not only, however, was the investigation as a whole to be conducted in this way, but the experiments themselves were to repeat the same pattern. Individual experiments were in themselves worthless, and proved nothing. They became valuable only by uniting and combining with others. Each separate phenomenon was like a gleaming point, which sends out its rays in all directions—it must therefore be examined from all sides if a complete conclusion as to its nature was to be reached. This could not be done by single experiments, although a plausible demonstrator might make it appear that he had 'drawn together isolated arguments to *one* point'. [47] In order to achieve this concentration of effort it was necessary to treat each experiment with the greatest objectivity, but at the same time to combine the experiments so that 'they border one on another and touch each other directly'. Thus joined, they would form a single experiment 'of a higher kind'. Goethe thus intended to treat each phenomenon as the centre of a number of relationships, and to follow down the radiating lines until they met, when, as Professor Fairley says, 'out of the wholeness of the evidence the truth would emerge'. [48] It was not enough to examine colours, for example, by means of prisms only. Goethe examined them from the point of view of the physicist, the artist, the psychologist, the plant-biologist, the physiologist, and the theologian, and hoped that workers in other fields would supplement his research. [49] By means of these converging lines of approach it would be possible to see each individual phenomenon in the round.

In all this, Goethe appears once again to have had the image of the radiating centre in mind. It is true that he speaks often of 'a series of experiments' ('eine Reihe von Erfahrungen'). But his description of each phenomenon as a radiating centre, and his insistence on the need to direct the experiments towards a single point, seem to imply that the series was thought of as circular. As Professor Fairley summarizes the essay: 'At any given point of inquiry it was not for science to take a single

line of approach, but to take every line, and, as it were, to rotate round the centre till the investigation had come full circle. . . .' [50] Moreover, the description of the experiments as bordering upon and directly touching each other seems to suggest once again the transformed leaves of the calyx, which were similarly 'joined into a whole', and 'pressed round close to one another'. It is noteworthy also that Goethe speaks of the experiments combined in this way as producing a single experiment of a higher kind. Just as, in the Urpflanze, there had been a higher and a lower union, depending on whether the leaves were assembled and concentrated in the calyx, so also there was a lower kind of experiment which would not lead to the truth. 'With the other method', Goethe writes, 'where we seek to prove something that we are maintaining by means of *isolated* experiments, as it were by [rhetorical] *arguments*, the result is often obtained almost *fraudulently*, if indeed the whole matter does not remain in doubt'. [51] The assembly of experiments with a common aim or centre in view was essential to the discovery of the truth. Otherwise, only half-truths could arise, just as the vegetating, as distinct from the flowering plant, could only be said to be half alive. Thus the use of the centre-symbol as a guide to scientific investigations was to lead to that wholeness, that combination of subjective and objective methods, which Goethe so much desired. Experiments designed to deal with *one* point, aimed at a unitary centre, would 'mediate' between subject and object, as the Green Serpent with its flashing rays bridged over the two banks of the river.

The significance of the centre is not restricted, however, to this external symbolism. It represents also, as has been seen, an inward self which, by gathering its elements in union about it, prepares the way for the same kind of 'higher experience'. This was true, Goethe believed, even of physical properties: a creature that was 'developed about its centre, the basis of life', was relatively perfect; one which was developed at its extremities, relatively imperfect. [52] It was also true of spiritual perfection. There was, he said, strictly speaking, no distinction between the so-called higher and lower spiritual forces: 'they all demand equally a place at a common centre, which manifests its secret existence through this very harmony of all the parts towards

itself.' [53] By the very fact that all forces tend towards the same point, they reveal their common unity; when phenomena rank themselves next to one another they manifest their inward common life ('ihr inneres Gesamtleben'). [54] The centre is in fact unity, no matter where it is encountered. In it, opposition is resolved, so that to discover the centre is indeed to give birth to the seed of the hermaphrodite Stone, where duality disappears.

The most striking illustration of this inward concentration occurs at the turning point of *Wilhelm Meisters Wanderjahre*. Wilhelm has for years been on his travels, unable to settle down anywhere owing to an oath never to spend more than three nights at any one spot. In addition, he has been obliged to scatter his energies in countless directions: as his friend Jarno describes him, he is like a curious wooden staff which puts out leaves wherever it is planted, but can never take root. To Wilhelm's 'manysidedness', Jarno opposes his own 'one-sidedness', or better, the limitation of his interests to a particular field. As Wilhelm journeys on, he meets with an increasing number of people who, like Jarno, have devoted themselves to one study: a carpenter, an estate-owner, a student of literature, a sculptor. In all this, Goethe's own indecision before his journey to Italy is reflected: his simultaneous interest in painting, drawing, physiognomy, geology, botany, anatomy, drama, lyric verse, novel-writing, mining, forestry, alchemy, public life and political activity, skating, horse-riding and fencing—and his attempts to excel at them all. Even in Italy he was not wholly decided, and for a moment intended to devote his life to science alone. Not until September 1787 could he say that he knew what was to become of him and of his talents. Wilhelm is in a precisely similar case, and he also soon arrives at what seems to him the ideal solution. 'How', he asks, 'can Man stand against the infinite, unless he gathers within his innermost depths all the spiritual forces which are drawn away in so many directions?' [55] Wilhelm also seeks to achieve harmony within himself by an inward concentration. Continuing his soliloquy, he says: 'Can you so much as imagine yourself in the midst of this eternally living order, so long as there is not in you also a constant movement about a pure centre?' [56] Now the emphasis

is laid not only on the 'pure' centre—purified, that is, from its subjection to the peripheral emotions—but also on the cosmic necessity for man to act in such a fashion. The eternally living order is one which itself rotates about a centre as the planets revolve about the sun. Wilhelm too must act in this way, the movement must be repeated 'in you also'. As Goethe had noted in his diary of 1780: 'I must see in what sequence I move round myself.' Moreover, just as the direction of scientific endeavour towards a common centre was to make possible a higher recognition of the truth, so also the direction of spiritual forces towards an inward centre was to be recognized by its fruits. 'And even if it were difficult to find this centre within you', Wilhelm goes on, 'you would recognize it by the fact that a beneficent effect proceeds from, and bears witness to it'. [57] A similar thought is expressed in the poem *Vermächtnis*. The circling of the earth and moon about the sun, Goethe writes, reveals to man the need to turn about his own inward sun and centre:

Das Wahre war schon längst erfunden,
Hat edle Geisterschaft verbunden;
Das alte Wahre, fass es an!
Verdank es, Erdensohn, dem Weisen,
Der ihr,[1] die Sonne zu umkreisen,
Und dem Geschwister wies die Bahn.

Sofort nun wende dich nach innen:
Das Zentrum findest du da drinnen,
An dem kein Edler zweifeln mag.
Wirst keine Regel da vermissen:
Denn das selbständige Gewissen
Ist Sonne deinem Sittentag.

The centre is not only a revelation of truth, it is also a guide to right action. Its veracity is not to be doubted, and its beneficent rays spread out from within, guiding and illuminating morality as the sun shines on its circling planets. Wilhelm, in seeking the centre, is attempting to achieve this independence of conscience,

[1] *Ihr* must refer to *die Erde*, which does not appear as a separate word, but is included in the word *Erdensohn*. Goethe's late poetry often takes such liberties, and he is clearly thinking here of the earth and the planets in their courses.

to acquire a harmony beyond good and evil, where every act proceeds freely and naturally from motives neither egoistic nor altruistic, but almost divinely indifferent.

A long period passes before Wilhelm comes to adopt this standpoint in its entirety. For many years he continues his wandering life, scattering his talents in all directions, until at last he is released from his oath and, under the influence of a sculptor-friend, resolves to limit himself to a particular branch of study. This is the turning-point in his life: his many-sidedness is about to give way to the one-sidedness advocated by Jarno.

At this stage, when the breadth of Wilhelm's interests is about to contract, a curiously imaginative episode occurs in the account of his life. Wilhelm is led by a member of the semi-religious order to which he belongs towards a high mountain. As darkness draws on he sees numbers of tiny flames swaying and rising out of the ground; they draw out into long lines, and join from all directions in his ascent towards the summit. At length they meet and form a sea of flames around him, whereupon Wilhelm perceives that they are not simply flames but torches, held by men. The thousands of flickering lights present an imposing contrast against their dark background. But the torches and the the men who hold them do not exist for their own sake. Their meaning is explained to Wilhelm by his companion: 'These lights, which shine beneath the earth day and night all the year round, promoting hidden, almost unattainable earthly treasures, now well up from their depths and brighten the open night. Rarely does one see so joyful an assembly, in which a process so useful, yet scattered beneath the earth and removed from sight, reveals itself in its entire fullness, and makes visible a great secret union.' [58] The torchbearers are, it seems, the depths of unconsciousness, which now well to the surface and reveal a hidden concord. The forces which Wilhelm has been scattering broadcast have hitherto been almost unknown to him, and unattainable, although their work has been going on nevertheless. Now they come towards a common centre and reveal themselves in all their fullness. So Goethe described his experience in Italy: the soul welled up, and he felt a kind of inward transfiguration, a sense of freer life. Wilhelm also, when he

reaches the centre of the sea of flames, becomes aware of a kindred feeling: 'Hollow masses of rock moved forward, as though in a theatre, and now revealed *a gleaming interior* to the eyes of the delighted spectator.' [59] (My italics.) In the same way, it will be recalled, the union of the sexes in the plant was to reveal 'the plenitude of the innermost depths'. Wilhelm is at once held in tension and satisfied at the uncovering of these hidden forces. His resolve to renounce his many-sidedness is bearing fruit, and the contrast to his former state is emphasized when Goethe opposes to this image of the subterranean flames ascending in lines towards a centre that of a volcano with its wild release of energy. 'This spectacle seemed far more friendly than when a volcano rises up, and with its foaming roar threatens vast areas with destruction, and yet it glowed in an ever mightier, ever broader, and ever denser stream, sparkled like a galaxy of stars, and though soft and gentle, spread out boldly over the entire region.' [60] The comparison at once calls to mind that other volcano, the Brocken, in the First Part of *Faust*. There the passionate Faustian storm and stress, seizing whatever comes in the way of its appetites, is well symbolized by the mighty downward rush of golden lava which sprays and scatters over Mammon's palace. Now the direction is reversed: the sources of energy ascend steadily and regularly towards union, with an almost inevitable progress. If the volcano is Goethe's Romanticism, these converging radii of life-giving flames represent his Classicism.[1]

The symbol of perfect harmony is however not always centripetal. The miraculous coruscation of Thomas Vaughan was from centre to circumference, not from circumference to centre. Goethe also uses the image in this way, in his Rosicrucian poem *Die Geheimnisse* (1784-6). At one point in this fragment he describes the Rosy Cross itself:

[1] For yet another example of this symbol in literature cp. the alchemical passages in *Axël* by Villiers de l'Isle Adam, especially the following. 'Et voici que ceux-là qui ont osé, . . . qui ont embrassé la loi du radical détachement des choses . . . voici que, tout à coup, ces élus de l'Esprit sentent effluer d'eux-mêmes ou leur provenir, de toutes parts, dans la vastitude, mille et mille fils vibrants en lesquels court leur Volonté sur les évènements du monde . . . sur les forces déchaînées des éléments!' (*Oeuvres Complètes*, 1923, vol. IV, p. 207.)

Es steht das Kreuz mit Rosen dicht umschlungen.
Wer hat dem Kreuze Rosen zugesellt?
Es schwillt der Kranz, um recht von allen Seiten
Das schroffe Holz mit Weichheit zu begleiten. [61]

The Cross, surrounded with roses, represents for him the combination of stern wrath and tender love. Christ's death is a necessary part of his glorious resurrection. This union of opposites is further developed in the sun-like image which is superimposed on the cross:

Und leichte Silber-Himmelswolken schweben,
Mit Kreuz und Rosen sich emporzuschwingen,
Und aus der Mitte quillt ein heilig Leben
Dreifacher *Strahlen, die aus Einem Punkte dringen*;[1]

Here then the symbol is reversed. The new life flows not towards but away from the centre. Thus again the important feature seems to be not the direction of movement, but the steady relationship of all parts to their common centre.

The unconscious nature of these subliminal forces, of which Wilhelm becomes so vividly aware, has already been referred to, as well as the reliance which Goethe placed in them: the centre 'cannot be doubted', it has an independent power of its own which is in itself creative. Goethe was of course well aware of the conception of the artist's creative work as a welling up of unconscious forms, and he said almost as much in a letter to Schiller: 'I believe that everything done by genius, as genius, takes place unconsciously.' [62] Or again, in the *Zahme Xenien* of the same period:

All unser redlichstes Bemühn
Glückt nur im unbewussten Momente.
Wie könnte denn die Rose blühn,
Wenn sie der Sonne Herrlichkeit erkennte?

But the best-known of all his images attempting to portray this descent into the world of uncreated forms is the scene in the Dark Gallery in the Second Part of *Faust*, the magician's descent to the Mothers. In suggesting that this great scene is indebted in large part to alchemical symbolism I have no desire to deny the value of the numerous interpretations which have already

[1] My italics.

been made. Goethe's symbol is wide enough to embrace almost all interpretations, certainly all those which respect his poetic vision, and its fundamental meaning has never been in any real doubt. But since Goethe was so clearly influenced by the alchemists, profoundly and throughout his life, it is justifiable to outline the undoubtedly alchemical parallels in the 'Mothers' scene.

Faust has been commanded by the Emperor to produce Helen of Troy before his eyes, a task to which he feels himself unequal. Mephistopheles professes great indignation at Faust's half-hearted yielding on so grave a point: such enterprises are no part of everyday magic, and he declares himself unable to assist in any way. Except, he adds, if Faust is prepared to pull the chestnuts out of the fire himself. Mephistopheles is quite prepared to supply him with directions. Faust, then, must make the journey to the Mothers in the uttermost depths, goddesses unknown to man, who guard the eternal forms of things. There is no road to them:

> Kein Weg! In's Unbetretene,
> Nicht zu Betretende; ein Weg an's Unerbetene,
> Nicht zu Erbittende. Bist du bereit?

To find them, Faust must pass through endless wastes, a nothingness beyond imagination:

> Und hättest du den Ocean durchschwommen,
> Das Gränzenlose dort geschaut,
> So sähst du dort doch Well' auf Welle kommen,
> Selbst wenn es dir vor'm Untergange graut.
> Du sähst doch etwas, sähst wohl in der Grüne
> Gestillter Meere streichende Delphine;
> Sähst Wolken ziehen, Sonne, Mond und Sterne;
> Nichts wirst du sehn in ewig leerer Ferne,
> Den Schritt nicht hören, den du thust,
> Nichts Festes finden, wo du ruhst.

Yet in this Naught Faust hopes to find the All. Mephistopheles, finding he cannot shake this resolve, hands Faust a key. With this he must descend—or rise, it is all one—into the void, until he sees a glowing tripod, which will announce to him the presence of the Mothers. There he will see the forms of all past things, floating in cloud-like wraiths. Summoning all his courage,

he must now advance boldly to the tripod and touch it with the key, whereupon the two will be joined. The tripod will follow him wherever he goes, and accompany him even as he returns to the world of consciousness. With it in his possession, Faust can conjure up such heroes as he will: the smoke of incense will be transformed into whatever shape he chooses. Here Mephistopheles' instruction ends: Faust sinks, and returns later with the tripod to see the union of Paris and Helen with his own eyes.

In this scene there is more than a hint of alchemical ideas. Indeed, Faust's 'hin zum grossen Werke' may be a direct reference to the *Magnum Opus*. The void which he enters, the nothingness in which he hopes to find the All, is surely akin to the mysterious 'return to the primal matter' of the alchemists. This primal matter was the whole universe: 'lapis noster', as 'Raymund Lully' wrote, 'est prima materia omnium rerum universalium'. [63] To seek the Stone was therefore to seek knowledge of all things, to know the nature of all created and uncreated forms. At the same time, it meant that the Will, in Boehme's words, must 'become Nothing'. In entering this spaceless, timeless region—'um sie kein Ort, noch weniger eine Zeit'—Faust must lose all sense of individuality, all differences must vanish. There he will see the forms of all things veiled in cloud—'Wie Wolkenzüge schlingt sich das Getreibe'—recalling perhaps again the promise of 'Raymund Lully' that the alchemist who reached his goal would perceive 'spiritus fugitivos in aere condensatos, . . . et animalium etiam hominum, qui vadunt sicut nubes'. [64] As Faust sinks beneath the surface he may also bring to mind the famous alchemical motto: 'Visita interiora terrae, rectificando invenies occultum lapidem': explore, that is, the innermost reaches of the mind to discover the hidden centre. Moreover, the return to the primal matter was often called the return to the Mother, or to the maternal womb of things. [65] And in the Cabbala, which many alchemists took as their Bible, the plural form is found. In the principal work of the Cabbalist tradition the primal trinity, or first three emanations of God, are in fact referred to as the Mothers. [66] They are associated also with the so-called First Point, a gleaming light which may suggest Faust's glowing tripod. From this point all things are

created: 'From the midst of the impenetrable mystery . . . there glimmers a faint undiscernible light like the point of a needle, the hidden recess of thought, which even yet is not knowable until there extends from it a light . . . from which all (things) issue.' [67] Goethe may possibly have had some such passage as this in mind when he came to write of the Mothers.

In the shape of the tripod there is also a suggestion of the Stone of the Philosophers. Arnoldus de Villanova described the Stone as 'triangulus in esse', [68] and its triune nature has already been frequently mentioned. The triangle was moreover often associated with the seed or new spark of life—the central embryonic form of the Stone—which Goethe endeavoured to discover. 'To us Christians', says Paracelsus, 'the sole Centre and origin of all things has revealed Himself and allowed Himself to be known in the centre of the triangle, or the Trinity of divine truth.' [69] Another alchemist speaks of discovering 'the True Centre in the Centre of the Triangle, and the one true Matter of the precious Philosophers' Stone'. [70] Thus to unveil or reach the centre is equivalent to achieving that full integration of body, soul and spirit which the Stone represented. When, therefore, Faust mounts to the surface, drawing the triangular tripod after him, it is as though the centre were drawn up into the region of conscious thought. The rebirth of the Youth in the *Märchen* is accompanied in a similar way by the ascent of the Temple with its three kings, also representing a trinity, to the surface. Body, soul and spirit are brought into harmony, and become an undifferentiated unity. The union of male and female which is said to follow represents of course the same harmony: the ascent of the Temple and the bridging of the river simultaneously proclaim the millennium of peace. So also when Faust returns to the surface with the tripod Helen and Paris are united before his eyes. But for Faust the goal is not yet reached, it is only presented to him in symbolical form, as the alchemist might have felt close to perfection when his work in the laboratory seemed to be successful. Faust's brutal intervention between the two lovers sets him back again on his quest, and it is only after long search that he himself is finally united with Helen.

If Goethe was in fact thinking of the alchemical work when he wrote this scene, he veiled his thought in a poetic form which

leaves little trace of its origins. Unlike the *Märchen*, where the alchemical symbols are used almost openly, *Faust* appears to present them in an almost entirely transmuted state, and they have become true poetic images. A comparison of the two works shows however a number of similarities. The death of the Serpent seems to be replaced by Faust's descent to the void; the rising of the Temple with its trinity of kings is paralleled by the ascending tripod; and the whole is crowned by the union of male and female. In the following chapter it will be possible to trace these similarities yet further. The 'Mothers' scene is an essential preliminary to the appearance of Homunculus.

The various implications of the symbol of the centre have now been sketched. As Goethe describes it, it is a point of peace and harmony within the vicissitudes of normal life. At times, it represents an almost divine detachment from things. It is also frequently associated in his mind with moments of crisis, as in the case of his journey to Sicily, Wilhelm Meister's ascent to the mountain-top, Faust's descent to the Mothers, and the self-sacrificing death of the Green Serpent. Thus far, then, the pattern of the Urpflanze has been followed to the point at which the calyx is reached, and the new 'centre of life' discovered. The pattern can now be followed further in association with Goethe's Colour-Theory: it will be possible to trace the growth of the centre, the tinge of red, until it prevails, and the dual opposites are resolved in one.

CHAPTER IX

HOMUNCULUS

THE quest of the Philosophers' Stone was in itself a wildly ambitious project. Equally ambitious, however, was the idea that it was possible to create little creatures, homunculi, similar to men in every respect, but produced by artificial means. There seems to be no doubt that the alchemists sincerely believed in the possibility of such a miracle, and some went so far as to claim success. Since Goethe also made use of the same idea in the Second Part of *Faust*—at a stage, in fact, following almost immediately the scene of the 'Mothers', just discussed—there is good reason to examine here some of the alchemists' beliefs concerning this aspect of their work, and to attempt an interpretation of its meaning.

Firstly then, as to the method by which homunculi were said to be created. The most widely known passage describing this, and that from which Goethe is generally supposed to have derived his own Homunculus [1] is that in the first book of Paracelsus' work, *Of the Nature of Things*. It occurs in a section dealing with generation of all kinds, showing how everything, not only human beings and plants, but minerals and rocks as well, is created by the conjunction of two sexes. From this, Paracelsus proceeds to 'the generation of Artificiall men', and seeks to demonstrate that this can be accomplished in the same manner. In his description, however, the sexual aspect seems at first sight to be relegated to a secondary position. The emphasis lies on another favourite doctrine of the alchemists, putrefaction. Paracelsus' directions are:

> Let the Sperm of a man by it selfe be putrefied in a gourd glasse, sealed up, with the highest degree of putrefaction in Horse dung, for the space of forty days, or so long until it begin to bee alive, move, and stir, which can easily be seen. After this time it will be something like a Man, yet transparent, and without a body. Now after

this, if it bee every day warily, and prudently nourished and fed with the Arcanum of Mans blood, and bee for the space of forty weeks kept in a constant, equall heat of Horse-dung, it will become a true, and living infant, having all the members of an infant, which is born of a woman, but it will bee far lesse. This we call Homunculus, or Artificiall. And this is afterwards to be brought up with as great care, and diligence as any other infant, until it come to riper years of understanding. [2]

Various statements in this extract require comment. Firstly, it may be recalled that 'putrefaction', in alchemical literature, signifies the death of an organism, in this case the male seed, and its preparation for rebirth. Secondly, this rebirth is obscurely described in the remainder of the procedure. The seed is placed in horse-dung, which, as manure, was known to be a nutritious substance, and was consequently believed to be as capable of ensuring the growth of human seed as of promoting the growth of crops. The vessel containing the seed and its nutriment is, in fact, to take the place of the maternal womb. For this reason, the seed is to be left in the vessel for a period of forty days, or, as is said later, forty weeks, the normal period of human gestation. In this way, then, Paracelsus believes that he has replaced by art the function of nature. He has produced an artificial mother for his seed, in which it can grow as well as though it were in a human body. It is essential to remember, however, that this growth is said to be possible only after the seed has putrefied, that is, it must die in order to be reborn.

Further light on this topic is shed by another reference to the homunculus which Goethe may be said with certainty to have known. This occurs in the *Chymical Wedding* of Christian Rosencreutz, which he read in 1786, and which may have contributed some of the ideas in the *Märchen*. A brief outline of the story contained in this book will afford not only some basis of comparison between Goethe's fairy-tale and the general run of alchemical allegories, but also another account of the creation of homunculi. The supposed author of the book, Rosencreutz, is led by magical means to a mysterious castle, where he undergoes many trials of virtue and courage. At length, he is introduced to a number of Kings and Queens, who, at the close of the ceremonies, are all suddenly and unaccountably beheaded.

This causes Rosencreutz considerable surprise, until he is told: 'This Death shall make many alive.' He is now asked to assist in restoring the dead bodies to life, and sails with many companions to an island, where the corpses have been carried. There he assists in the seven stages of an alchemical operation, the third stage of which concerns the golden globe, already referred to, on which the light of the sun is concentrated. This, of course, is the point at which rebirth begins to replace death: the assembly of forces about the centre gives rise to the spark of new life. The spark, or seed, is indeed now found, for the golden globe is split open and reveals within an egg. But the process from this point onwards becomes chaotic: from the egg springs a black bird, representing 'putrefaction', which is fed on the blood of the Kings and Queens, turns white, is boiled in a vessel of milk, comes out 'glitteringly smooth', is painted blue, feeds on a snake, and is finally in its turn beheaded, and its body turned to ashes. This procedure is no doubt full of hints for the initiated. However, the bird being dead, it now remains to restore its ashes to life. This is done by moistening and moulding the ashes into small shapes, which are thereupon heated. When the time is ripe, the moulds are opened, and '. . . there appeared two beautiful bright and almost Transparent little Images, the like to which Mans Eye never saw, a Male and a Female, each of them only four inches long; and that which mightily surprised me, was, that they were not hard, but limber and fleshy, as other human Bodies, yet they had no Life'. [3] The similarity of these creatures to the homunculus of Paracelsus is clear, although on this occasion there are homunculi of both sexes. These are also transparent little human beings, although whereas Paracelsus' homunculus lacks a body, these lack life. Later, they are fed on the blood of the dead bird, as it in turn was fed on the blood of the Kings and Queens, recalling the injunction of Paracelsus to feed the creature on 'the Arcanum of Mans blood'. Finally, after a trumpet has been placed in the mouth of each, through which a stream of fire is seen to pass, they grow to full stature and appear as one of the pairs of Kings and Queens beheaded at the beginning of the operations. The work is now completed, and at length Rosencreutz is allowed to return home. To conclude, no doubt is left that these small

creatures were regarded as homunculi, since a printed marginal note declares:

Homunculi
animatta-
lio trans-
feruntur (sic) [4]

And later, when the King and Queen are awakened to life by Cupid:

Homunculi
excitantur
a cupidine [5]

To seek for any thread of logical thought amongst these complex allegories is next to impossible. One thing does however stand out clearly. The homunculi represent, as in Paracelsus, a rebirth after death. The immediate source of their regeneration is the bird, from whose phoenix-like ashes they spring, just as the Youth in the *Märchen* is restored by the death of the Green Serpent. But they themselves, again like the Youth, are revived from the death which they underwent long since. Their resuscitation is thus in accordance with the normal trend of alchemical teaching. The 'King' is killed, writes an unknown author, 'in order that from him a new child may be born'. [6] Similarly, a dead man cries to the reader from his tomb: 'ex me heros ille pacis, quem universus orbis aspicit, exoriatur . . . hic enim est *filius* ille praepotens, *minimus*, parem in totius mundi ambitu non habens.' [7] (My italics.) In each case the child, the little son, or the homunculus is born after the death either of itself or of some other creature.

The second feature of the preparation of homunculi according to Paracelsus, the union of the two sexes, appears however to be at variance with the one just discussed. It is not obvious that a creature produced by 'putrefaction' can also equally well be produced by sexual mating. There are occasions, however, when the alchemists speak as though the latter were the sole method. 'Raymund Lully' writes simply: 'Si ergo fili scis talum masculum appropriare tali foemellae, habebis *puerum*, qui nunquam morietur, imo faciet mortuos vivere, ac post mortem vivet cum illis.' [8] Or again: 'Post haec potes facere conjunctionem masculi et femellae ad finem, quod ipsi per artem generant filium ignis,

qui est tantum in amore omnium philosophorum.' [9] In these passages the notion of death and rebirth appears to be left completely out of account. The contradiction is resolved when it is recalled that for the alchemists all fructification of whatever kind was believed to be due to the death of the seed. Welling writes that a bean or acorn planted in the earth will first putrefy before putting forth the beanstalk or oak of which it is the embryo. [10] The mating of the two sexes was therefore inevitably combined in the mind of the alchemist with the idea of death. The seed in passing from the one to the other was assumed to putrefy before it could begin to grow. On occasion, in fact, the two symbols are combined in one, as in Starkey's allegory in *Ripley Reviv'd.* There the alchemical King and Queen are said to embrace, and to melt away and putrefy in the very act. Thus three supposedly different stages of the work are combined in one: male and female are united, there is a return, by melting, to the first matter, and a death. Once again it is seen how almost all the alchemical symbols representing the road to perfection meant one and the same thing. To return to the first matter was equivalent to the renunciation of individual will, which in turn was equivalent to 'death', and at the same time represented a union with 'otherness' and the acquisition of a whole nature. The process was, in a crude form, a Liebestod. This however is by the way. The essential point of the present argument is that the alchemist drew no distinction between loving union and death. The two methods of creating homunculi implied for him therefore no contradiction. Rather, as can be seen in the extract from Paracelsus, the two ideas were complementary. In describing how the two sexes are necessary for all generation, Paracelsus at once begins to speak of putrefaction. Only later does the reader come to realize that this putrefaction is taking place within the artificial womb, into which the male seed has been introduced, so that the sexes have after all been joined.

It is now evident, however, that the method of preparing the homunculus is precisely that given in other passages for the preparation of the Philosophers' Stone. The Stone too was formed either after the death of the elements which composed it, or as the result of a union between the so-called male and female substances, gold and silver, sulphur and mercury, and

so forth. Indeed the alchemists frequently appear to make no distinction at all between the Stone and the homunculi. In the Rosencreutz allegory one might equally well expect the numerous alchemical operations to result in the discovery of the Stone, as in the creation of the tiny King and Queen. Starkey on one occasion refers to the goal of his work as the 'Hermaphroditical Infant', [11] and leaves it to the reader to decide in what manner he will interpret the words. On another occasion, an alchemist, states that the glass of the retort must be made clear and thick—'in order to prevent the vapours which arise from *our embryo* bursting the vessel'. [12] It is quite impossible to determine here whether the Stone or the homunculus is intended. As Campbell Brown remarked, the symbol of perfection, amongst countless others, was 'an infant newly born'. [13] There seems to be no question of keeping the two symbols apart; they slide into one another with every reference. This is remarkably the case with Heliodorus, in whose account of the *Opus* the Stone is made to speak in the first person. 'Bring me up from childhood', it cries; 'I am a tiny boy, until the power comes which strengthens me and leads me to manhood.' [14] The Stone and the homunculus are, it seems, two aspects of one and the same thing. This identification is emphasized when the characteristics of the young boy are examined. He is, for example, described in the passage quoted in extracts above[1] by three names: 'heros ille pacis . . . heros ille rubeus . . . filius ille praepotens minimus'. In the designation 'heros rubeus' there is a clear reference to the ruby-red colour of the Stone. Again, 'Lully' ascribes to 'the boy' the faculty of restoring the dead to life—'faciet mortuos vivere'[2]—this time referring to the aspect of the Stone as an Elixir of Life. In another place, the boy is even said to transmute metals:

> Dissolve, putrefy, wash and coagulate,
> Until *the golden boy is fixed* . . .
> Then the spirit of the body is well acidified
> And ready for the work, the which *shall tinge*
> *The six untimely metals* and
> By art shall heal all manner of ills. [15]

The homunculus was, then, simply one more of the innumerable synonyms for the Stone. It was natural, in a study which laid so

[1] See p. 208 above.

[2] See p. 208 above.

much emphasis on the supposed sexual attributes of all natural things, and which constantly spoke of the seed of metals, that the result should be thought of as being itself an infant, which by careful attention could be encouraged to grow to full stature. Incidentally, of course, this gave rise to a belief in the possibility of creating real human beings by artificial means. Many alchemists no doubt read the instructions for the generation of homunculi entirely in this sense. Paracelsus shows no sign of identifying the homunculus with the Stone: he treats him, as did many others, as an entirely separate project, and continues the passage quoted with the statement that the homunculus gives rise to giants and dwarves and other fabulous creatures. But just as the Stone itself was in large part a symbolical achievement, while the practical work represented, for the initiate at least, only the outward and visible form of an inward act, so also, it may be supposed, the real creation of visible and tangible homunculi was not always regarded as an indispensable part of the work. Many alchemists were aware that the manufacture of gold was not their primary aim. In the same way, some of them presumably regarded the homunculus almost exclusively as a symbolical creature.

This leads directly to the question, what did the homunculus represent? It seems that he was not a mere useless addition to the list of synonyms for the Stone which some alchemists liked to construct, but rather had a definite role to play in conveying the meaning of the alchemical work. Above all, the homunculus needed to grow. He always appears at first as a minute shape who develops in time to full stature. He is thus surely equivalent to the seed of the metals, which was also said to be revealed by removing all outward obstructions, that is, by the 'death' of the outward body. The homunculus was the embryonic form of the perfection of the Stone. In him, therefore, the alchemists were equipped with a symbol which would express everything in their work of an organic, gestatory, and developing character. They could place him within the 'Philosophers' Egg', or, as in the case of Paracelsus, in an artificial womb, and there permit him to begin his course of growth. They could speak of him as an embryo, or an infant, a young boy or a man, and in each case emphasize the developmental character of their work. There were of course other means of symbolizing the same

feature, hence the frequent use of plant-similes, but the homunculus was preferable to these since he emphasized the purely human aspect of the symbol. The seed of the metal, to which he so closely corresponded, and which was to grow until it filled the whole 'body' with its radiance, was after all in its most important aspect a symbol of the seed of divine life in Man, the germ of a desire for God. This was the seed which the religious alchemist desired to implant and cultivate. In Starkey's allegory, indeed, the 'twinkling spark' in the centre of the water does become a human figure, 'very beautiful, even to the parallel of Helena'. The growth of this tiny form, which 'waxed bigger and bigger, until the Water appeared no more, but she herself had transmuted its whole substance into her shape', [16] is thus the growth of the central seed until it fills the whole frame. It was in this sense, presumably, that an author quoted by Gottfrid Arnold wrote: 'There is born in him the dayspring of all joy, Christ', [17] an expression taken literally by those women mystics who have believed themselves pregnant with the Lord. Seen in this light, the homunculus corresponds not only to the seed of the metal and the central spark, but also to the incarnation of God or Christ within the adept, the initial point of his identification with divine will. He is what Sir Thomas Browne, in another context but with similar meaning, called 'the man within'. The homunculus was admirably suited for the expression of this belief in the possibility of a new man arising from the old Adam. The symbol of the Stone was in many respects inadequate for the purpose. To say that the Stone died and was reborn was to pile confusion on confusion. But to show a dying body and the new man rising out of it was almost to describe the meaning of the work in so many words. The homunculus therefore not only emphasized the application of the symbolism to human nature, but also simplified the representation of one of the most important aspects of that symbolism: the steady and dynamic growth of the rejuvenated spark of perfect life.

Goethe was certainly aware of the significance of the seed and the centre in the alchemical work. It has been seen how, in the *Theory of Colours*, he spoke of the tinge of red which could be enhanced until it prevailed, and subsumed within itself the dark and light opposites. It seems probable therefore that he would

have used the parallel symbol of the homunculus in order to portray the same idea dramatically in *Faust*. This can, I believe, be affirmed by examining those scenes in which Homunculus appears.

There can be no doubt at all about the manner in which Homunculus is created. The scene of his birth is 'a laboratory in the mediaeval style, with extensive and clumsy apparatus for fantastical purposes'. Amid these retorts and furnaces is seen Faust's former servant, now the alchemist Wagner, who has for long been attempting the creation of homunculi, and is now nearing success. He sits by the fire, expectantly watching the innermost glass phial in which the little man is rapidly taking shape. From Wagner's first words it is clear that the association between Homunculus and the Philosophers' Stone is present to Goethe's mind:

> Schon in der innersten Phiole
> Erglüht es wie lebendige Kohle,
> Ja wie der herrlichste Karfunkel,
> Verstrahlend Blitze durch das Dunkel.

It is not as a human creature, but 'like a glowing coal, a glorious carbuncle' that Homunculus first appears. From the beginning he is described in terms of the Philosophers' Stone. Again, the lightning flashes which dart out from the gem through the gloom recall the image of the radiant centre with its coruscating lines. As the final stage draws near, the darkness is turning to light:

> Schon hellen sich die Finsternisse,

implying perhaps the coming unity of the polar opposites. At last the glowing red disappears and a white light takes its place:

> Ein helles weisses Licht erscheint!

This again is in accordance with the alchemistic view, sometimes expressed, that the highest stage in the operations was marked not by red, but by white, an ambiguity taken over by Goethe in his Colour-Theory. Last of all, the glass phial hums and drones, grows dark, and clarifies, to reveal the little man inside:

> Das Glas erklingt von lieblicher Gewalt;
> Es trübt, es klärt sich, also muss es werden!
> Ich seh in zierlicher Gestalt
> Ein artig Männlein sich geberden.

Thus Homunculus is created in almost precisely the same manner as the Philosophers' Stone, and is to begin with referred to as though he were the Stone.

This identification continues when Homunculus is referred to by Thales as a hermaphrodite:

> Auch scheint er mir von andrer Seite kritisch;
> Er ist, mich dünkt, hermaphroditisch.

This does not mean, as Latham has suggested, that Homunculus is simply of 'doubtful' sex: that he is an indeterminate being, and consequently indeterminate in gender. [18] Rather, as a living incarnation of the Stone, Homunculus naturally combines both sexes in himself. He is the 'Hermaphroditical Infant'.

It may be objected however that if Homunculus is identified with the Stone, he must already be perfect. The description of his creation, with its red and white symbols of perfection, certainly speaks for this point of view. But he is, of course, only the embryonic form of perfection. For the alchemist, it was a great achievement merely to have found the central seed, and he described it accordingly in terms of the fullest praise. Nevertheless, a great part of the work still remained before him: the homunculus must grow to full stature, and until this stage was reached the whole work with all its ramifications must be repeated over and again. The same argument applies to Goethe's Homunculus. Although the carbuncle and the red and white colours have appeared, he is as yet by no means perfect, and the alchemistic process is repeated at least once, and perhaps twice, before any real approach to perfection can be discerned in him.

Throughout the whole of the Classical Walpurgis Night in which he lives and dies, Homunculus is conscious of a deficiency. His constant desire is to 'arise', 'mir selbst gelüstet's zu entstehn', and it is to fulfil this purpose that he questions Thales and Anaxagoras. He seeks 'the dot upon the i'; he is only half alive, 'nur halb zur Welt gekommen', since although he has spiritual qualities, so that he can divine Faust's secret dream, he lacks material solidity ('greiflich Tüchtighaftes'). He needs in fact to be embodied ('verkörperlicht'). In this again he resembles the homunculi already discussed, although the nature of the deficiency is defined differently by different authors. He

approaches most closely to the homunculus of Paracelsus, who was said to be 'transparent and without a body'. The homunculi of Christian Rosencreutz, on the other hand, are certainly embodied; they are even 'limber and fleshy', but in their case it is 'Life' that is lacking. They are not fully restored until the trumpet is placed in their mouths and the stream of life-giving fire descends from above. In the same way, the Youth of the *Märchen*, who is restored to life by the death of another creature, remains for a time without the spirit—'der Geist war noch nicht zurückgekehrt'. In these three cases several possible variations are included: the one has life but no spirit, another spirit but no body, a third body but no life. The explanation of these discrepancies appears to be that the homunculus was merely intended to be shown as deficient in some respect. The precise nature of the deficiency was unimportant. The ideal state was one of perfect harmony between body, soul or life, and spirit, and so long as the homunculus was lacking in any one of these three, he was incomplete. Or, to put it another way, duality still existed. Since the seed had not yet transmuted all to its own shape, it was still in conflict with its surroundings, and the final harmony could not take place.

Goethe's Homunculus now seeks advice on this point from all available sources. At last he resolves to follow that of Proteus, and 'marry' himself to the Ocean. In this manner of course the two opposed elements will be united. Homunculus himself is Fire, a living flame, the 'filius ignis'. By his union with the Ocean the conjunction of male and female is again represented, so that, as Boehme wrote: 'through the reunion of the two Tinctures [fire and water] an image of Paradise is born, a male virgin'. [19] Galatea descends in her throne from the moon and sails across the sea towards Homunculus, who casts himself into the waves and shatters his phial against her feet. The fire of love within breaks forth and mingles with the waters:

> Welch feuriges Wunder verklärt uns die Wellen,
> Die gegen einander sich funkelnd zerschellen?
> So leuchtet's und schwanket und hellet hinan!
> Die Körper sie glühen auf nächtlicher Bahn,
> Und rings ist alles vom Feuer umronnen.
> So herrsche denn Eros, der alles begonnen!

The scene closes with a paean of praise for the elements here united. For a moment at least oneness and harmony are restored.

Here again the theme of marriage is combined with the theme of death. Homunculus, by destroying himself, becomes one with the four elements; he returns to the primal matter from which all things sprang, and is simultaneously wedded to his complementary and opposite nature. It is also possible that Goethe had in mind something akin to the return to the mother by which the alchemists also sought to represent this yielding of personality. The nature-philosopher Oken had propounded, some ten years before the Classical Walpurgis Night was written, the theory that man must have been formed originally in a womb far greater than the human one. He went on to show, by extremely dubious arguments, that this was in fact the sea. [20] Whether or not Goethe paid any respect to the opinions of Oken, —and after all, the association of such ideas is not unusual—it is clear that the birth, marriage and death of Homunculus are conceived entirely on alchemical lines. One final parallel may be quoted, although it is extremely unlikely that Goethe knew of this precise passage. It is taken from the work of Heliodorus in which the Stone speaks of itself as 'a tiny boy'. 'At last', it declares, 'the divine moisture gains power over my nature, so that I contain the qualities of the elements, well-mixed, within me, in a most supernatural fashion.' [21] As far as Homunculus is concerned, the operation is now complete. His desire to 'arise' is fulfilled; he has achieved harmony and wholeness, and is at one with the whole universe of elemental Nature.

Thus far, however, only the outward life of Homunculus has been described. He is the creature of Wagner and, to a lesser extent, of Mephistopheles; he leads an existence apparently independent of Faust's. If Goethe intended to represent in him also 'the man within', one would expect to find some identification between Faust and Homunculus. Something of this kind was presumably in Duentzer's mind when he spoke of Homunculus as 'the soul of Faust in his strivings after highest beauty'. Homunculus does indeed seem to replace Faust during the whole of the second act. The latter scarcely appears at all, except for a few brief moments to land in Greece and to seek help from Chiron in his search for Helen. The thread of action

running through the various scenes is kept in motion entirely by Homunculus: it is his story, not that of Faust or Mephistopheles. If, however, Homunculus *is* Faust, or that part of him which feels its deficiency and seeks to remedy it, the act can truly be said to represent a link between Faust's first vision of Helen and his final union with her.

One essential feature in the creation of Homunculus, a feature present in all the alchemical accounts, has so far remained unmentioned. Homunculi were always said to be born as the result of the death of some other creature. In *Faust*, Homunculus is apparently created entirely by Wagner, and the spectator sees only the final stages of the operation. There is no mention of any death. This want is supplied, I suggest, by the apparent death of Faust. He himself has made the journey to the Mothers, he has 'visited the interior of the earth', and has witnessed, although not enjoyed, the consummation of the union between Paris and Helen. At the vision of ideal beauty he has rushed forward in a fit of jealousy, and fallen paralysed at Helen's feet. This paralysis carries over into the second act. While Homunculus is being fashioned by Wagner, Faust is in fact still lying motionless in an adjoining room. Here, then, is the 'dead' man in whom the new spirit is about to be born. The old Faust is dead; by his descent to the Mothers he has made the necessary preparation, and now the new man begins to stir within him. It is true that the work itself is performed by Wagner, but if this interpretation seems plausible it is possible to regard his intervention as a technical device for bringing Homunculus onto the stage. Faust himself cannot do so, for he is to remain lifeless until Homunculus is born. But once the miracle has taken place, life returns and Faust and Homunculus can follow their separate, though curiously parallel paths.

The similar situation in the *Märchen* appears to have been conceived in the same way. Indeed the *Märchen* seems in many respects to have been a preliminary study for the Second Part of *Faust*. There, the Youth, with the same jealous motive which inspires Faust to grasp at Helen, casts himself at the Lily-maiden and falls lifeless at her feet. Like Faust, he lies unconscious and to all appearances dead, until the self-sacrifice of the Serpent restores him to life. When at last the spirit does return

to the body of the Youth, his first act is to utter the Lily-maiden's name: 'Sein Auge glänzte vor unaussprechlichem Geist, und das erste Wort seines Mundes war "Lilie".' In the same way, Faust remains unconscious from the moment of his attempted seizure of Helen until he sets foot in classical Greece. Again, the first words which come to his lips are for Helen: 'Wo ist sie?' Helen and the Lily-maiden, Faust and the Youth, thus recall one another, and the scenes in which they appear are surely identical in conception and meaning. The new-born Youth has already been compared with the new 'centre' brought to life by the Serpent's death, and thus also with the alchemical homunculus. Faust is now for a moment identified with him, and thus becomes Homunculus. There is in *Faust*, however, a complexity which does not appear in the earlier work. Instead of a single character to carry forward the quest, there are now two characters. This again is inevitable from a technical point of view. In the *Märchen*, the dead Serpent could be left behind and almost forgotten without disturbing the plot unduly. In *Faust*, it was impossible to allow the principal character to disappear so early from the scene. The old Faust and the new, represented now by Homunculus, therefore continue side by side. Their two quests are really one: as Homunculus needs Galatea, so Faust needs Helen in order to complete his nature, and to 'arise'. Neither of them can come to full being until duality is resolved for them in this way, until, in fact, the seed has become 'very beautiful, even unto the parallel of Helena'. Faust's quest is therefore taken up and represented throughout the second act by the quest of Homunculus. The little man represents the awakened desire, the growing central spark of longing for ideal beauty and wholeness within Faust, and in his self-immolation at the feet of Galatea may be seen, distantly echoed and epiphanized, a second palingenesis of Faust himself.

The significance of Homunculus is not entirely restricted to Faust. He represents at the same time the evolutionary history of Man. This is especially apparent in his meeting with Proteus, the spirit of change and transformation. It is from Proteus that he learns how he must pass through 'tausend, abertausend Formen', until he reaches his final stage as a true human being. This is in fact the lesson of metamorphosis which Goethe learnt

to appreciate fully in Italy, and which he embodied in his first botanical essay. There is no short route either on the inward 'spiritual ladder', or in the outward world of history. In his macrocosmic aspect therefore Homunculus repeats the idea implicit in his nature as the new man in Faust: the need for steady and organic growth. In this he does not belie his alchemical origin. The alchemists also regarded their work as symbolizing both the inward rejuvenation of Man, and the eternally recurrent creation and re-creation of the Universe. Just as Goethe could perceive analogies between the solidification of a mountain-range and the crystallization of a work of art in his own mind, so here he combines a biological and historical meaning with a spiritual symbol. To express the significance of Homunculus in a word, he is metamorphosis, which, as Goethe saw it, inevitably implies not only transformation but also death and rebirth.

The interpretation of Homunculus offered in this chapter treats him solely from the point of view of alchemical notions. It assumes that Goethe interpreted the symbol as it is interpreted here, and shows that he conveyed the same meaning in dramatic form in *Faust*. This approach is valuable in that it reveals what is likely to have been in Goethe's mind as he wrote. But it does not entirely account for Homunculus. At times Goethe regards him as little more than a humorous sprite. His desire for activity—the 'Tätigkeitstrieb'—remains an invention of Goethe's own. There is certainly no suggestion that Homunculus is of divine origin, or that he represents the God in man. On the contrary, he addresses Mephistopheles as 'cousin', because, as Goethe explained to Eckermann, both are in contact with the daemonic elements.

It would make for a neat interpretative pattern if one could agree with Jung that the whole of *Faust II* is a poetic representation of the alchemical work. But if this were so one would expect to find further evidence of such symbolism in Act III. There would be some hint, however obscure, that Faust's marriage with Helen represents the marriage of the male and female qualities. Euphorion would surely be shown as the new Homunculus springing from their union. This would be in full accordance with the alchemical practice of repeating the opera-

tions over and again till final perfection was reached. There is however nothing in Act III to suggest alchemy directly in any way. Helen is never mysterious, always Argive, and Euphorion quickly becomes entangled in the allegory of Lord Byron. Any such interpretation as Jung's must rest on inferences drawn from Act II.

Nevertheless it may well be that Goethe had the pattern of the *Magnum Opus* in mind as a scaffolding for at least the first three acts of the second part, however much he departs from it or transmutes it in the detailed elaboration. The alchemical interpretation does not conflict with others, rather it may supply a basis of consecutive symbols on which the play evolves.

Goethe's symbol is too far-reaching for any single interpretation to suffice. Thus when Homunculus is equated with the humanistic movement and the revived interest in Greek literature, as Schröer suggested, that is true in a sense. Any awakened desire for wholeness, whatever form it may assume, is equally capable of suggesting Goethe's meaning. Nevertheless, Homunculus is so clearly a figure of the alchemical tradition, and Goethe includes so much that can only be explained in terms of alchemy, that one is obliged to attach greater importance to these factors than to others. If Goethe had not himself shown such faith in alchemical doctrines, one might admit that Homunculus was merely the refashioning of an old fable which happened to appeal to Goethe's fancy. As it is, the essential role of Homunculus is that which he was always intended to play by the alchemists. He thus supplies a satisfactory transition between the first three acts of *Faust II*, and welds into a whole what might otherwise appear to be a succession of disconnected events. Faust's first vision of Helen and his final union with her appear not as the beginning and end of a quest in which he has played almost no part, but are joined by the gradual development within himself of a spark of perfect beauty.

CHAPTER X

MALE AND FEMALE

THE last two chapters have traced the pattern of development implicit in the Urpflanze and in Goethe's Colour-Theory through some of its stages. The ideas of renunciation, discovery of a central point, and steady development towards perfection, jointly portrayed by these two theories, have begun to emerge also from Goethe's description of his life, and from his purely literary work. It remains now to show how the final stage, the union of the polar opposites, represented in the plant by the union of the two sexes, and in the Colour-Theory by the colour red, was also frequently in Goethe's mind in his non-scientific writings. The fact that, in the Urpflanze, the truly final stage is represented by the seed, need arouse no objection. Just as the Philosophers' Stone was sometimes called a tincture or quintessence, and sometimes a hermaphrodite, according to the quality it was desired to emphasize, so also the two stages in the Urpflanze are equally representative of perfection. The present chapter, therefore, will deal solely with Goethe's use of the symbol of the hermaphrodite, and its influence of his thought as a whole.

The alchemists were not alone in describing perfection as a combination of the two sexes. The idea was known to Plato, and to the Gnostics and Cabbalists, both of whom, however, were more closely connected with the alchemical tradition. But while Goethe must have known of the Platonic myth, it seems likely that his alchemical studies were the main source of his ideas on the subject. The alchemical authors whom he read frequently mention the hermaphrodite nature of the Stone, thereby drawing attention to its combination of active and passive qualities. Starkey calls it 'our Hermaphrodite, mighty in both Sexes'. [1] Other examples have already been encountered. Boehme's Sophia, the Second Person of the Trinity, is described in the same way: she was 'not a woman, nor a man, but both together'.

[2] The Pietist Arnold also wrote in similar terms, and shared the view that the first man had been in such a blessed condition. Adam before his fall had carried Eve within his own body, and only later had the two sexes become separate. From that time onward, man had been dissatisfied with his lot, and had sought to be reunited with his other self, who was Christ, or the heavenly Virgin Sophia. This was however yet another name for the Stone. Man himself was isolated and in need of a feminine or divine counterpart, but the search for this counterpart was always represented as a search not merely for a woman, but for a hermaphrodite. This led, as always, to an extreme confusion of terms. At one moment the Stone might be referred to as a Virgin, at another it would clearly be intended to represent Christ, and yet again it would be spoken of as both male and female. This confusion arose in part from the universally immanent nature of the Stone. The Stone itself was one, but as Starkey wrote: 'hoc tamen unum nominatur nominibus omnium rerum istius Mundi.' [3] In so far, then, as the Stone represented the One and All, it was male and female, and could bear all possible names, but in so far as it perfected the male nature of the seeker it was female.

As the feminine counterpart of man, the Stone, which can be equated in many respects with the Sophia of Boehme and the Pietists, was also said to be related to him by bonds of blood and marriage. According to Arnold, who made much of this point, the heavenly virgin descended into the souls of men, on her errand of salvation, in whatever form was necessary: 'that is, as a maiden, a bridegroom, or as a mother, etc.' [4] She was also, in some traditions, a sister of the soul, in the same sense, according to the Cabbalists, as in the Biblical verse: 'my sister, my love, my dove, my undefiled.' [5] These notions appear in alchemy in the symbol of the return to the mother, or to the primal matter. In the passage from Ripley already quoted, this return is clearly regarded as a sexual union, so that the mother is also a bride. In Starkey's allegory of the Stone, the Golden King, seeing the Mercurial Queen in danger, 'knew her to be his Sister, his Mother, and his Wife, and compassionating her estate, ran unto her, and took her in his Arms'. [6] Later, Starkey gladly spreads as much confusion as possible, when he writes:

The King is Brother to his Wife,
And she to him is Mother;
One Father is to both, whose life
Depends upon each other. [7]

These lines can perhaps be construed to mean that man, as an individual, stands in need of a divine counterpart which, since it exists before him and is his Creator, fulfils the role of a parent. At the same time, however, the divine is present in a man throughout his life, and is thus, from the temporal point of view, a sister. Finally, to achieve perfection, the brother and sister must be joined together, and thus the sister becomes a wife. So long as a man remained imperfect, the 'sister', or divinity within him, remained separate. This was well brought out in an allegory by an anonymous German author, who made his hero, after numerous adventures, marry his sister. The sages whom he meets warn him that he must never forsake his bride. 'You need not trouble yourselves about this matter,' he replies, 'for we were born together, and brought up together as children, and now that I have married her I will never forsake her, but cherish her till her last breath; nay even death itself shall not sever us.' [8] Thus the sister may be compared to the divine spark believed by the alchemists to exist in all men. It was always present, and needed only recognition and loving care in order to grow and to complete the identification with divine will. In Starkey's allegory this spark does in fact become a beautiful woman, with whom the 'King' is at length mated. The sister was thus in one sense a representation of the unconscious, allegedly divine counterpart within a man. To 'marry the sister' was to overcome duality, and to achieve oneness with the parent of all things.[1]

In the circle of Goethe's acquaintances it seems possible that this symbol was in current use. Lavater, at all events, could find no higher praise for Barbara Schulthess, to whom Goethe sent the first manuscript version of *Wilhelm Meister*, than to call her a *Männin*—a man-woman. [9] The word may have entered his mind through his association with the Pietists, among whom

[1] The idea is better known today in the form of C. G. Jung's theory of the 'anima' or 'animus', which, like most of Jung's psychological theories, is closely linked with alchemy.

the idea would probably have been common. There can be no doubt at all, however, that Goethe was acquainted with it not only through such Pietists as Gottfrid Arnold, but also from his alchemical studies. It may be that the conception of Mignon owes something to it. For a long time in the *Theatralische Sendung*, Mignon's sex remains undetermined, and she is referred to alternately as both 'he' and 'she'. In the sequel, the *Wanderjahre*, she is called the boy-girl, 'das Knaben-Mädchen'. [10] But for all her endearing qualities Mignon can scarcely be said to represent perfection. To discover Goethe's use of the hermaphrodite symbol as an ideal it is necessary to turn to another part of *Wilhelm Meister*. At an early stage in the *Lehrjahre*, he speaks at some length of Wilhelm's admiration as a youth for Tasso's *Jerusalem Delivered*, an admiration which he shared himself, as he shows in his autobiography. This poem, read both by Wilhelm Meister and by Goethe in the same German translation, made a great impression on the young man, and gave 'a definite direction' to his scattered thoughts. He was unable to read it through, but certain passages remained fixed in his mind, in particular the scenes in which Clorinda appears. Clorinda is the warrior-woman who is unwittingly vanquished by her lover Tancredi, and the terms in which Goethe describes her are worthy of some notice. 'Above all', he writes, 'Clorinda fascinated me with her every word and deed. The male-femaleness, the quiet fullness of her existence, had more effect on my developing mind than all the artificial attractions of Armida, although I did not despise her garden either.' [11] Here then the combination of male and female qualities is clearly associated by Goethe with perfection, and if the passage may be taken as autobiographical it provides curious evidence of Goethe's attraction towards this kind of belief even at an early age.

Clorinda, however, naturally plays no part in the story of Wilhelm Meister. She is mentioned, it seems, only to be forgotten. Nevertheless, her name does appear again for a brief moment, and at a point in the novel where it throws a good deal of light on Goethe's meaning. She is linked in a curious way with Wilhelm's ideal love, the beautiful Natalie. Wilhelm's story has progressed considerably by this time. He has fallen in love over and again, and has each time been disappointed.

At last, however, as he lies wounded in a forest, the perfect form of Natalie appears to him. For her he feels no ordinary love. She appears to him almost as in a vision, her head ringed with golden rays, and a shining light radiating from her body, so that from now on his one thought is to find her again. Lying on his sick-bed, recovering from his wounds, he seems to see her once more. 'He saw the enveloping cloak fall from her shoulders, her face and form disappeared in a blaze of glory. All the dreams of his youth were joined together in this image. He seemed now to have seen the noble, heroic Clorinda with his own eyes. . . .' [12] The vision of beauty and ideal perfection is thus associated in Wilhelm's mind with the male-femaleness of Clorinda. This is, moreover, no arbitrary connection. At this stage of the novel Natalie is not known to Wilhelm by name, but is always referred to as the beautiful Amazon ('die schöne Amazone'). In itself the name may indicate nothing; it was given in Goethe's time to any young woman who went hunting or rode on horseback. But coupled with the warrior-woman Clorinda it at once recalls that the legendary Amazons were in fact believed to be women with male characteristics. Clorinda herself was a kind of Amazon, and this clearly meant for Goethe, in a symbolical sense, that she combined masculinity and femininity in a perfect form. It is thus more than a casual detail that, when Natalie first appears to Wilhelm, her body is hidden from him by a man's cloak.[1] The title of 'Amazon' which Goethe gives to her appears to be synonymous for him with the high ideal of perfect union and harmony.

There is, however, another sense in which Natalie is linked to the occult tradition of Goethe's youth. She fulfils another of his, or rather Wilhelm's, early dreams, a dream represented by a favourite painting in his grandfather's house. In this painting was portrayed a 'sick prince'—'ein kranker Königssohn', who lay helpless in bed, consuming himself for love of his father's bride, while the aged king stood pitifully at the foot of the bed, unable to assist his son. [13] In some way, this scene had impressed itself on Wilhelm's mind, and had come to symbolize for him his own condition. It meant for him quite as much as

[1] Eichendorff employs the same device in describing an ideal woman at the close of his story, *Das Marmorbild*.

Clorinda, and for a similar reason. 'How I grieved', he cries, 'how I still grieve for a youth, who must stop up within himself the sweet desires, the fairest gift that Nature has bestowed on us, and conceal within his bosom the fire which should warm and invigorate himself and others, so that his inmost self is consumed with fearful pain.' [14] The painting portrayed for him his own feeling of isolation and separation from the ideal. He himself was obliged to shut up within his own soul the ardent love which sought an outlet in every direction. The meeting with Natalie at last fulfils this urgent longing. As she appears to Wilhelm's inward eye, she recalls not only Clorinda, but also the princess, the 'bride of his father', who is to heal his suffering: 'He thought again of the sick prince, towards whose bed the lovely princess approached in sympathy and silent modesty.' [15] Natalie is thus not only the ideal perfection represented by Clorinda, she is also the feminine counterpart of Wilhelm's soul. As the 'bride of his father' she stands almost in a motherly relationship to him, and it is not until the closing stages of the book that he feels able to surmount this apparent obstacle. Then, as Wilhelm stands hesitating to accept Natalie's offered hand, his irrepressible friend Friedrich drags him forward, and, flinging open a door, reveals the long-lost painting itself. 'Who is that old goatsbeard with the crown there,' asks Friedrich, 'wringing his hands at the foot of his sick son's bed? Who is the beauty entering the room, with her decorous, roguish eyes, which bear at once both poison and cure?' [16] There is, he implies, only one conclusion to be drawn. The painting has remained so long in Wilhelm's mind because it represents his relationship to Natalie. She is to him what the bride of his father is to the sick prince, the object of all his desires, and now that the way lies open, Natalie and Wilhelm must marry with all haste.

Before going any further, there is one phrase in Friedrich's remarks which requires comment. He speaks of the princess, or of Natalie, as carrying poison and cure, ('Gift und Gegengift'), in her decorous, roguish eyes. The paradoxical combination of decorum and roguishness is not uncommon. But the mention of the poison in her eyes, which also bring relief to the suffering prince, is startling enough to deserve some examination.

It may recall, for example, the dangers and benefits which Goethe both desired and feared as he was planning his journey to Sicily. It suggests much more strongly, however, an alchemical parallel. The Philosophers' Stone, in its symbolical aspect as a perfect being, might often be called a heavenly virgin, as has already been seen. At the same time, it was said to be a Universal Medicine, and it is this aspect which is of special interest here. The medicine was in fact a deadly poison, and the Stone was, in this sense, often supposed to be made from such substances as arsenic and vitriol. As Starkey wrote: 'this Water is by Philosophers called their Venom, and indeed it is a very strong poison. . . . But as concerning the Medicine that is made by it, it is certain that of all Medicines in the World it is the highest, for it is the true Arbor Vitae.' [17] Or again:

> It is a poison most strong of ire,
> A stronger poison cannot be thought, . . .
> But no man shall thereby be intoxicate
> From time, it is to Medicine Elixerate. [18]

According to Pliny, Mercury, another of the synonyms for the Stone or its principal component, was 'Liquor aeternus, venenum rerum omnium'. [19] Taken literally, such statements may have destroyed many who swallowed the poisons in the hope of an eternal life this side of the grave. Symbolically, however, the meaning is clear. The only road to perfection was through 'death', either physical or spiritual. In order to be reborn in a new life, the alchemist must utterly relinquish all personal desires, and this might well be compared to the acceptance of a cup of bitter poison. This is stated reasonably clearly in another passage of similar import, in which the alchemist is compared to a dragon or serpent. 'He eats the mercury as a poison', it is said, 'and dies; drinks it again, and becomes alive, and thus he casts off all impurity, for he becomes white and lives.' [20] In the same way, Natalie, as the ideal of perfection, can only be attained by Wilhelm if he is willing to accept from her the double-sided cure. Like the Lily-maiden and Helen, her touch is deadly, but her cure only the more certain. One may compare here Gundolf's comment on Goethe's Pandora, of whom Epimenides says:

> Und neue Freuden, Leiden-schaffende, gab sie mir. [21]

In Gundolf's words, Pandora is 'of divine, that is, cosmic origin, and is for men at once an opposite and a fulfilment, at once a danger and a temptation'. [22] Natalie could, it seems, either destroy Wilhelm's life or restore it to him. But since Wilhelm has now for some time been a member of the secret Society of Renunciation, he is able to accept her hand, for a time at least, and enjoy with her the union and harmony which in his tortured, love-denying state he has so long desired.

Wilhelm, for his part, and in so far as he identifies himself with the sick prince of the painting, may be compared with the princely Youth of the *Märchen*, and with the King's son in whom the alchemists frequently symbolized their imperfect gold, which they hoped to restore to its full splendour.[1]

Thus Goethe's alchemical beliefs play no unimportant part in the story of the *Lehrjahre*. They do not obtrude, in such a way that the reader is constantly aware of them. But they do supply an important part of the philosophical background of the novel, and Goethe goes as close as he dares to introducing purely mystical beliefs into a realistic work. The allusions are indirect, and traceable only through Wilhelm's memories of Clorinda and of the painting. But if these memories are meant to symbolize the relationship of Wilhelm and Natalie, there is much to suggest that Goethe's belief in alchemy continued to inspire his literary work.

An interesting sidelight is thrown on the Amazon-symbol by a passage in Goethe's review of a contemporary novel, published in 1806. The title of the novel, *Bekenntnisse einer schönen Seele*, was in itself sufficient to catch Goethe's attention, for it was the name he himself had given to the narrative of the life of Fräulein von Klettenberg, included in the *Lehrjahre*. In Goethe's novel the 'schöne Seele' is portrayed as a woman of great perfection, one who lives a life of quiet devotion and pious harmony. Natalie, the Amazon, proves later to be her niece, and inherits her good qualities. When, therefore, Goethe came to review the new book, he must inevitably have had in mind as he read it both Natalie and Fräulein von Klettenberg. This

[1] For a long period, Wilhelm comes close to identifying himself with Hamlet. Did this perhaps also suggest to Goethe's mind the phrase 'der kranke Königssohn'? The parallel is not inapt.

is indeed clear from his comment: he agrees that the title of 'schöne Seele' is apt for the character of the heroine, but regrets that the title chosen should be identical with the one he himself had already used in the *Lehrjahre*. 'We would have preferred', he writes, 'to entitle this work *The Confessions of an Amazon*.' Such a name, he continues, would have been more descriptive of its contents, 'for there is depicted here a true man-woman, . . . a virgin, a virago in the best sense of the word, whom we can admire and honour, without being precisely attracted to her'. [23] Goethe thus makes clear the connection in his mind between the 'schöne Seele' and the Amazon. The normal meaning of the word is rejected: the heroine is a 'virago in the best sense of the word', that is, her combination of maleness and femaleness is not that of a brutal warrior-woman, but of an ideally perfect character in whom the contrasted opposites are harmoniously united. At the same time, she is not an 'attractive woman'; like Natalie, she would probably have replied to the question whether she had ever been in love with the words 'Never or always'. She is averse from sexual love, and the admiration felt for her is purely for her spiritual qualities. The Amazon has thus become almost identified with the Pietist-alchemical ideal, and is well represented in Natalie, the spiritual descendant of Fräulein von Klettenberg.

Natalie is, however, not the only woman who appeals to Wilhelm in this way. Almost all his loves resemble her in one form or another. The Countess at the castle where he acts with his troupe of players, and from whom he is forced to flee at their first kiss, is so much like the Amazon that they might have been taken for twin-sisters. [24] Later, in his long search for the lost vision, he meets another woman, Therese, with whom he also falls in love, again because of her supposed resemblance to Natalie. From his friend Jarno's description of her, he hopes indeed that she is herself the object of his search: 'she puts a hundred men to shame, and I should call her a true Amazon, whereas others who go around in that ambiguous dress are only agreeable hermaphrodites.' [25] Jarno's intention in making this distinction seems to be that most young women who dress in male attire for the hunt appear to combine masculinity and femininity merely by the style of their clothes, without any

inward correspondence. They are 'hermaphrodites' only on the surface. The true Amazon however combines both qualities in indissoluble union, and her harmonious nature does not depend on her external appearance. Nevertheless, it is in the disguise of a gay young huntsman that Therese first appears to Wilhelm, so that for a moment he mistakes her for a man, and only later realizes that with all her admirable qualities she is still not the Amazon he is seeking.

Turning back now to Wilhelm's first love, Mariane, it is noticeable that she too is not without a trace of this symbolism. When Wilhelm first meets her, she seems to him all that Natalie was later to become. She is a youthful ideal, and represents for him, until he is disillusioned, complete perfection. She is the 'other half of his soul' [26] and 'like an eternal dawn',—eine ewige Morgenröte—[27] a name frequently given by Boehme and his followers to the heavenly Sophia and subsequently adopted with enthusiasm by the German Romantics. But what is more important, she too is first introduced to the reader in male attire, as 'das weibliche Offizierchen'. [28] It is true that a quite normal explanation is offered for this: Mariane has just returned to her dressing-room from the stage, where she has been acting a male part. Nevertheless, it is as a woman in man's clothing, not as an actress, that Goethe seems to have envisaged her. Later in the book, when Wilhelm has been separated from Mariane for many years, he sees an officer in the rooms of Philine, another actress to whom he feels passionately attracted. As Wilhelm enters, the stranger makes a hurried escape, but Wilhelm, far from feeling jealousy, is at once convinced that the officer must be Mariane, and begins to hunt for her high and low. Why Mariane should choose to masquerade thus in broad daylight, far from any theatre, in the costume she wore when Wilhelm first met her, is not explained. It is one of those slips which reveal more of the author's mind than the story itself. Wilhelm, and Goethe too, seem to have remembered Mariane not simply as an actress, but as a woman in a man's uniform. She may then have been one of those 'agreeable hermaphrodites', resembling the perfection of Natalie, but in the end falling short of her complete harmony. Thus all the women for whom Wilhelm feels a strong affection, with the exception of Aurelie,

whom he can scarcely be said to have loved, and Philine, whom he loved in a different way, share in this quality of dual sex. His imagination, first guided into a definite path by the story of Clorinda, seeks the fulfilment of its dreams first in Mariane, then in the Countess, and Therese, and finally beyond all doubt in Natalie, the Amazon herself.[1]

It is not possible to leave the *Lehrjahre* without some mention of Mignon, who is also involved in this symbolism, although the delicacy of this most charming of Goethe's creations makes all interpretation seem an impertinence. Mignon, as has been seen, is a hermaphrodite, and it may be that in her Goethe was seeking to give open expression to the ideas which he veiled so carefully in Natalie. But above all, Mignon serves to express Goethe's own longing for redemption from isolation. She gives voice to his desire for the wholeness and perfection of the classical South; she is, so to speak, the image of perfection which he carries in his own breast, the child of his own fancy, his intuitive foreknowledge of his final goal. Her song, 'Kennst du das Land', utters Goethe's longing for Italy and classical Greece. But the way there, as she describes it, is difficult and dangerous: it can only be reached by means of a narrow bridge over a chasm of fearsome dragons:

> Kennst du den Berg und seinen Wolkensteg?
> Das Maultier sucht im Nebel seinen Weg,
> In Höhlen wohnt der Drachen alte Brut,
> Es stürzt der Fels und über ihn die Flut;
> Kennst du ihn wohl?
> Dahin! Dahin
> Geht unser Weg! o Vater, lass uns ziehn!

How far Goethe was consciously aware, as he wrote these lines, of the meaning which he later attached to them, it is not possible to say. But in the *Wanderjahre* he describes the scene again with curious effect. A friend of Wilhelm's has undertaken to paint some scenes from Mignon's life. Among these is one which

[1] Cp. Remy de Gourmont's similar use of the word in his mystical *Lettres à l'Amazone* and *Lettres intimes à l'Amazone*, 1914 and 1928. Addressed to a beloved American woman, they portray the same ideal of perfection: 'You are perfectly aware which side of the double nature mine is attached to, for it is one in its multiplicity.' (Transl. R. Aldington, *Letters to the Amazon*, London, 1931, p. 7.)

shows her, in the company of a rude band of gypsies, passing through the mountains near the Italian border. The scene is unmistakably that of the song. Goethe's description of it, however, introduces once again the double-language already met with in the *Wanderjahre*, as in the scientific works. 'The *terrible narrowness* of these masses of rock', he writes, 'was powerfully portrayed. The black gullies, cutting through in every direction, towering towards each other, threatened *to prevent all egress*, had not a bold bridge hinted at the possibility of *achieving contact with the outside world.* The artist also, with an imaginative sensitivity for truth, made visible a cave, which might be taken either for a natural workshop of great crystals, or as the home of a fearful and fabulous brood of dragons.' [29] Thus once again the full flowering of Goethe's genius had been achieved, as he felt, by passing through the narrow way, just as the plant, as it narrowed down to the calyx, 'ennobled' itself. Goethe in Germany could find no contact with the outside world. Like Wilhelm, he was obliged to conceal within himself the love he felt, to remain in a subjective seclusion. Mignon, by keeping him alive to the possibility of perfection in the South, leads him along the road, and her double nature shows him the form that perfection will take. The dangers of the journey, like those which Goethe feared to encounter on the road to Sicily, will be recompensed by the freedom to be achieved.

Returning now to the Amazon, we have here the end of a thread which can be drawn through a number of Goethe's works. He employs the word in a number of contexts where its association with an ideal woman can only imply the same connotation of double-sex as in the case of Natalie. In an unpublished fragment of the story *Der Mann von fünfzig Jahren*, for example, the 'schöne Witwe' who offers the Major her hand commends herself to him as an Amazon: 'Will you, as a loyal brotherly friend, a chivalrous escort, join yourself to an Amazon, who has never been able to form any very high opinion of men? Here is my hand.'[1] Goethe here employs once again the epithet which

[1] *WA.* I. 24. 104: It must be emphasized that this fragment was unpublished. The widow in the published version of the story is far from perfection, but there are features which suggest that Goethe was undecided about the role she was to play. The fragment was probably excluded because the widow had grown to be an imperfect character. It reads: 'Wollen sie als treuer

characterized his earlier ideal. He uses it in a more important context to describe the heroine of his play *Die natürliche Tochter*. Any thoroughgoing interpretation of this complex piece is out of the question, but there can be little doubt that Eugenie shares something of the classical poise and perfection of Natalie, at least in the opening scenes. She too is at times almost a divinity incarnate: just as Natalie appears to Wilhelm in a blaze of glorious rays, so too the vision of Eugenie seems to the 'Gerichtsrath' to be an almost godlike form:

> Und wenn der Priester sich, sein Lebenlang,
> Der unsichtbaren Gottheit niederbeugt,
> Die im beglückten Augenblick vor ihm,
> Als höchstes Musterbild, vorüberging;
> So soll von deinem Dienste mich fortan,
> Wie du dich auch verhüllest, nichts zerstreun. [30]

It is curious therefore that here again the word 'Amazon' occurs to Goethe's mind in describing her:

> Die Amazonentochter, die in dem Fluss dem
> Hirsche sich zuerst
> Auf raschem Pferde flüchtig nachgestürzt. [31]

These lines reveal moreover a further characteristic of the Amazons as they are described by Goethe. They are, as he says of them in *Achilleis*, tamers of horses:

> . . . . . unweibliche Scharen
> Wilder Amazonen . . . welche der Männer
> Süsse Gemeinschaft fliehen, und, Pferdebändigerinnen,
> Jeden reinlichen Reiz, den Schmuck der Weiber entgehen. [32]

Here, of course, they are simply the Amazons of legend, without further significance. But Eugenie also is said to assume the same role. Her father says that the taming of horses is her natural bent:

> Zu Pferde sollte sie, im Wagen sie
> Die Rosse bändigend, als Heldin glänzen. [33]

And in the verses immediately following he indicates the meaning of the symbol:

brüderlicher Freund als Rittersmann geleitend sich zu einer Amazone gesellen, die kaum einen leidlichen Begriff den Männern abgewinnen konnte. Hier ist meine Hand.'

In's Wasser tauchend, schwimmend schien sie mir
Den Elementen göttlich zu gebieten.

The horses represent the elemental passions, held by the Amazon in check. Egmont's Charioteer is able to control the plunging sun-horses, which drag him on towards his destiny, only to the slightest extent. He can only steer to right and left, avoiding the major pitfalls in his path, as Goethe in his youth was carried irresistibly forward by his Titanic urge. The Amazon, on the other hand, holds the reins and guides her mount at will. The same is true of the 'Knabe Lenker' in the second part of *Faust*. He too, like Mignon, represents the poet's creative gifts and like hers, his sex is indeterminate. 'Man könnte dich ein Mädchen schelten', says the Herald at the Emperor's court. But the boy shares in the perfection of the Amazon since he also is in control:

Rosse, hemmet eure Flügel,
Fühlet den gewohnten Zügel,
Meistert euch, wie ich euch meistre,
Rauschet hin, wenn ich begeistre.

The 'elements' are his to command, sweeping into impassioned movement or subsiding again into quiescence, both equally at his will. Similarly, when Wilhelm Meister intends to send his son Felix to school, he is advised by Jarno to have him educated by 'the horse-tamers', [34] who will presumably teach him to curb his impetuosity. Yet in spite of Wilhelm's foresight, it is a horse which, at the close of the *Wanderjahre*, dashes Felix into a river and almost kills him. At the house of Makarie, the mystic and ascetic of the same novel, however, horses are not allowed within the precincts: the elemental forces are turned away from her door. [35] Goethe's own attitude is best shown in his aphoristic essay, *Bändigen und Entlassen der Elemente*—the taming and unleashing of the elements—a title which in itself recalls the theme of the horses. It is true that in this essay Goethe is speaking rather of the storms and tempests of external nature, but the double-language of which he was so fond is also in evidence. 'It is obvious', he writes, 'that that which we call the elements constantly strives to pursue its own wild, destructive course. . . . The elements therefore must be regarded as colossal opponents, with which we must for ever be fighting, and which

can only be subdued by the utmost power of the mind, and with boldness and cunning, and even then only in isolated cases.' [36] This the Amazon does. Like Faust and the alchemists, she masters the elements and rides above them in serene consciousness of the harmony within. Such at least was Goethe's ideal. As the passage just quoted shows, he did not consider that it was attainable for any length of time.

Finally, the Amazon is almost always related to her lover by bonds of blood. This is strikingly true in the case of Eugenie. At the beginning of the play there is some suggestion that she is sought in marriage by the King. Her relationship to him is complicated in the extreme. She is in fact the natural daughter of the Duke, who is the King's uncle, and is therefore in this respect the cousin of the King. But her mother is the King's sister, so that Eugenie is at the same time the King's niece. Why Goethe introduced this double relationship it is difficult to say. It will be seen however that such semi-incestuous alliances between uncle and niece began to play an increasingly important part in the plots of Goethe's later stories. For the moment it must suffice to say that, had the play progressed as it began, that is, had the King's love for the Amazon developed, there would once again have been a family tie between the ideal woman and her lover. As it is, Eugenie gives her hand not to the King, but to the 'Gerichtsrath'. But to him also she speaks of herself as a sister:

> Vermagst du hohen Muths
> Entsagung der Entsagenden zu weihen?
> Vermagst du zu versprechen: mich, als Bruder
> Mit reiner Neigung zu empfangen? Mir
> *Der liebevollen Schwester*, Schutz und Rath
> Und stille Lebensfreude zu gewähren?[1]

In the same way, the Amazon of the *Wanderjahre*, although offering the Major her hand, asks him to be her 'brotherly friend', implying that love for the Amazon is to be entirely spiritual. Goethe was indeed extravagant, as a young man, in his use of the word sister. Caroline Herder and Johanna Fahlmer were both 'sisters', and the name was often simply a synonym for strong affection. As he wrote to the Countess Stolberg: 'My

[1] *Die Natürliche Tochter*, line 2887. My italics.

dear—I will give you no other name, for what are such names as friend, sister, beloved, bride, wife, or a word which should include the whole range of them.' [37] But when he speaks of Charlotte von Stein in this way one feels that he is weighing his words more carefully. Charlotte was certainly the model for Natalie and many other of Goethe's ideal women, and his love for her, like Wilhelm's love for Natalie, was of a quite different order. When, therefore, he writes of her that she was, in some previous incarnation, his sister or his wife—

> Ach, du warst in abgelebten Zeiten
> Meine Schwester oder meine Frau—

he is surely attempting to define some truly experienced sense of relationship with the ideal. As he wrote to Wieland: 'I can explain the imposing power that this woman has over me in no other way than by the transmigration of souls.—Yes, we were once man and wife. Now, we are aware of each other—veiled, in a spiritual cloud. I have no name to describe us—the past—the future—the All.' [38] At times, he could feel in the company of Charlotte a complete harmony of past and future, here and there, a sense of universal wholeness. She was, as he often called her in his letters, the 'A and O', [39] and here again the name is more than an extravagant compliment. 'You are transubstantiated for me in all objects', he writes, 'I see everything well enough, and yet see you everywhere.' [40] Charlotte, as he liked to think of her, had become as it were a real image of the immanent, universal divinity. He saw in her the living fulfilment of his youthful dreams of alchemy, a woman who was in reality the counterpart and completion of his soul. The Philosophers' Stone, so often referred to as a heavenly virgin, had here taken human form. It is not surprising therefore that Goethe should have thought of Charlotte as a sister.

The sister-motive approaches its peak in the one-act play, *Die Geschwister*. Charlotte von Stein appears here thinly disguised as Mariane, the supposed sister of a certain Wilhelm. Mariane is in fact the daughter of a former love of Wilhelm's, Charlotte, who at her death left Mariane in his care. Towards the 'sister', Goethe can therefore reveal his feeling for Frau von Stein at one remove. At the same time, he prepares the way

for the *Lehrjahre*, where the lovers are also to be named Wilhelm and Mariane. Just as the Mariane of the novel is a tentative approach towards the perfection of Natalie, so here in the play she is also a distant reflection of Charlotte. The channels by which Goethe allows his feeling to emerge are complicated, although the plot is simple. Mariane has been brought up to believe that she is Wilhelm's sister, and her great love for him is restrained by this belief within the limits of convention. He on the other hand knows that she is the daughter of Charlotte, but hesitates to reveal his equally strong love on account of her youth. The rival claims of another lover, Fabrice, stir him at last into action. He asks Mariane to choose whether she will marry Fabrice, or stay with him, her brother. Her passionate decision to remain relieves his conscience of the burden of responsibility. She has shown her preference for him, although believing that they can never marry, and now he feels entitled to reveal that they are not in fact related. To her amazement, he gives her the kiss of a lover. Fabrice withdraws his suit, and the supposed brother and sister are happily united. As Mariane says, the course of many such stories is reversed. Instead of the usual plot, common enough in the eighteenth century, in which the lovers are unable to marry at the last moment owing to an unsuspected consanguinity, the supposed obstacle to their love is here removed by the revelation that they are not related. The play is a waking fantasy, a dream fulfilment of Goethe's desire for Frau von Stein. The ideal woman, like the Amazon, is to be loved as a sister, but Goethe needs her as a bride. In the *Geschwister* he permits himself to realize this by showing that the social convention is unreal. Mariane is not Wilhelm's sister, and the marriage is a possibility after all. In the same way, the Wilhelm who identifies himself with the 'sick prince' is obliged to withhold his love for the Princess, or for Natalie, because he believes that they are too closely related. She is not his sister, but something very close to a mother. But this obstacle too proves in the end to be unreal: the relationship is entirely spiritual, and the social restrictions on incest do not apply. Thus in each case 'Wilhelm' is married to the fictional image of Charlotte von Stein, who in her turn is the complement and fulfilment of his soul.

A maturer treatment of the same problem is to be found in the slightly later play, *Iphigenie auf Tauris*. Here again Frau von Stein was indisputably the model for the heroine, who also bears some resemblance to Natalie. And again Goethe's mind manages, whether consciously or unconsciously, to work in the suggestion that Iphigenie is an Amazon. Pylades, on first arriving before the temple of Diana in which she serves, tells Orestes what little he knows of the priestess who is to sacrifice them:

> Man rühmet hoch
> Die Gütige; man glaubet, sie entspringe
> Vom Stamm der Amazonen, sei geflohn,
> Um einem grossen Unheil zu entgehn. [41]

The same idea appears in the earlier prose version: 'Sie glauben dass es eine der geflüchteten Amazonen sei, und rühmen ihre Güte hoch.' [42] There is, so far as I know, no legend which would justify this statement, and even if there were, it is difficult to see why Pylades should be made to utter it, since it bears no relationship to the rest of the play. It is intended rather to be understood as a mistake on Pylades' part, and to illustrate his and Orestes' ignorance of Iphigenie's true parenthood. Moreover, the prose version shows even more clearly than the verse form that the name of 'Amazon' is associated with goodness. Iphigenie is an Amazon and *therefore* must be good. The whole purport of Pylades' speech is that Iphigenie is not the savage barbarian Orestes believes her to be. Yet to call her an Amazon would in normal language serve only to confirm Orestes' fears. It must be assumed, therefore, that the name was associated in Goethe's mind with the idea of benevolent harmony as early as 1779, that is, before the character of Natalie was ever conceived.

In Italy, where Goethe completed the final version of *Iphigenie*, the idea of the 'Amazon' was still present in his mind. While in Verona, he saw a painting of St Ursula with her eleven thousand virgins, descending from the ships at Cologne, and awaiting the onslaught of the pagan hordes, His description is an interesting one. 'The saint stands in the foreground', he says, 'as though she had taken victorious possession of the land; she is very noble, Amazon-like and virgin, without charm' ('sehr edel, amazonenhaft-jungfräulich, ohne Reiz gebildet'). [43] Once again the word is used in association with nobility,

and this time also with virginity. The expression 'without charm' also deserves attention. In the account of the Amazons in *Achilleis*, the woman are said to forego 'jeden reinlichen Reiz, den Schmuck der Weiber'. Although women, they are without feminine charm. St Ursula therefore also lacks this femininity: Goethe sees her as a warrior-woman in whom the boldness of the male is joined to the purity of the female. It is interesting now to compare this description of St Ursula with Goethe's description of Raphael's St Agatha, of whom he said that he would let no word pass the lips of Iphigenie that could not equally well have been uttered by her. He comments in his diary on Raphael's treatment of the subject: 'He has given her a healthy, self-possessed virginity, without charm, but without coldness or roughness.' [44] The association of virginity and lack of charm is again in evidence, but the word 'Amazon' is this time not included. It is perhaps suggested, however, by the words which follow: 'without coldness or roughness.' Goethe may well have regarded these as masculine qualities of an undesirable kind. He began, it seems, to describe St Agatha in terms similar to those he had used for St Ursula. But as he writes the words 'without charm', which are associated in his mind with the Amazons, it occurs to him that he is giving too great stress to the masculine side of the saint's character. He adds, therefore, the words which will restore the balance. St Agatha, like Iphigenie, is not a brutal warrior like the Amazons of legend, but a model of the highest ideal, of perfection and virgin purity. She is 'manly' in the sense that many of Raphael's women, with their full rounded cheeks, have an almost boyish charm, and just as his men are sometimes indistinguishable in their soft beauty from women. Only in these terms could Pylades or Goethe think of tracing Iphigenie's ancestry to the race of Amazons.

In this play, however, the situation of the *Geschwister* is reversed. In the earlier play a pair of lovers, who are supposed to be brother and sister, are at length happily united because they are not so related. In *Iphigenie*, it is the realization by Orestes that the priestess is in fact his sister which supplies the core of the plot. Yet here again the solution proves in the end to be a happy one. In order to trace the guiding thought which

led Goethe to this solution it is necessary to interpret the play with Iphigenie in the rôle of Natalie, and Orestes as Wilhelm, the 'sick prince'. At the back of Goethe's mind is the thought that Iphigenie represents perfect wholeness and harmony. She resumes in herself all discordant opposites as though by a divine omnipresence, although, as a mortal being, she is also subject to the misery of mortal life. She is a 'sister' in more than the normal sense. For Orestes, however, doomed to isolation and the hounding of the Furies, she spells nothing but destruction. The curse of Tantalus and his own matricide hang heavily on his conscience, and the world for him is a place where one sin drags in its path a hundred others, each more terrible than the last. He sees in the 'sister' only death and yet greater evil, for, by sacrificing him to the goddess, she is adding one further horrible crime to the name of their house. Orestes is as yet unaware that Iphigenie, like the princess in *Wilhelm Meister*, carries in her eyes both poison and cure. As Boehme might have said, he knows only the Wrath, and not the Love of God. He sees only the suffering in which he exists, and not the redemption to which it will lead. In utter despair and resignation at the inexorable will of the Gods he fancies himself already in Hades. The shades of the Tantalids pass before his eyes, and he cannot believe that he is still alive: he is already sacrificed by the hand of Iphigenie, and only the presence of Electra is needed in Hell, in order to end in blood and guilt the story of his race. Thus far the mood of the play is in accordance with the tragedies of the Greeks. There is no escape from the wheel of Fate and recrimination. But in Orestes' redemption an entirely new element appears, derived not so much from the Enlightenment of the eighteenth century—Goethe was never a hopeful rationalist in that sense—as from the Hermetism of Goethe's early teachers. Orestes has accepted the burden of his guilt to the full; he has descended into Hell. But the descent into Hell of the alchemists, like the conscious crisis of the Pietists, was a necessary preliminary to salvation and glorious resurrection. It was the process of 'nigredo', called by Starkey the 'true Ignis Gehennae',[1] which was to lead to a rebirth of dazzling whiteness and splendour, just as the death of the Green Serpent made possible the

[1] See p. 118 above.

rejuvenation of the golden Youth and his marriage with the Lily-maiden. In *Iphigenie* Goethe is surely setting forth the same pattern, giving expression to the same belief. Orestes has reached the final limit of endurance; he seeks no grace or mercy from his sister's hand, but is utterly resigned to his merited damnation. Again, like the Green Serpent, he is prepared to sacrifice himself before he is sacrificed. But at the height of his delirium, as he welcomes Iphigenie to what he believes to be Hell, he is saved by her prayer to the gods. It is a prayer not only to Diana, whose priestess she is, but to both moon and sun:

> *Geschwister*, die ihr an dem weiten Himmel
> Das schönste Licht bei Tag und Nacht herauf
> Den Menschen bringet und den Abgeschiednen
> Nicht leuchten dürfet, *rettet uns Geschwister!*
> Du liebst, Diane, deinen holden Bruder
> Vor allem, was dir Erd und Himmel bietet,
> Und wendest dein jungfräulich Angesicht
> Nach seinem ewgen Lichte sehnend still.
> O lass den Einzgen, Spätgefundnen mir
> Nicht in der Finsternis des Wahnsinns rasen!'[1]

Sun and moon, day and night, light and darkness are one, a brother and sister joined in harmony. Iphigenie, by her prayer, recalls to Orestes the possibility of a unity after the divine pattern. In the recognition of this heavenly concord, Orestes also can escape the curse.

Goethe repeated this idea in a curious passage in his optical writings, *Paradoxer Seitenblick auf die Astrologie*. The astrologers were wrong, he maintains, to ascribe evil results to the presence of sun and moon in opposite corners of the heavens. 'The full moon does not stand opposed in enmity to the sun, but sweetly returns the light it lent to her; it is Artemis, gazing in love and longing at her brother.' [45] Similarly, Goethe notes with more than a touch of irony in the opening paragraph of his autobiography that the constellation at his birth was favourable: the moon was at the full, and the sun at its zenith. So also in the play the conflict in Orestes' mind is resolved by Iphigenie's prayer to Diana and Apollo, a resolution which might well be emphasized in a stage presentation by the momentary appearance

[1] *Iphigenie*, lines 1317-26. My italics.

of their symbols. The apparent opposites need not be in conflict. The curse becomes a blessing, through the power of love, when it is accepted to the utmost, as Orestes has accepted it. Self-judgment and mortification become salvation, death becomes rebirth, Orestes takes both poison and cure. The thundering wrath of the gods gives way to the mild beauty of the rainbow, and he is restored to new life.

But Iphigenie needs Orestes as much as he needs her. She calls on the goddess whose will has brought her to this spot to bring salvation to them both:

> Und ist dein Wille, da du hier mich bargst,
> Nunmehr vollendet, willst du mir durch ihn
> Und ihm durch mich die selge Hilfe geben.
> So lös ihn von den Banden jenes Fluchs,
> Dass nicht die teure Zeit der Rettung schwinde.

The brother and sister on earth must be united in accordance with the divine pattern. Thus the wish-fulfilment of the *Geschwister* is reversed. The brother and sister this time are joined, although not in marriage—that would be straining too far the demand on the spectator's goodwill. The oracular injunction 'to bring back the sister' is fulfilled in an unexpected fashion. Goethe has been criticized for the apparent casuistry with which he unties this knot, for Orestes always understood the Apolline oracle to mean that he must bring back the sister-statue of Diana. The reinterpretation of the oracle is, however, essential to the play. For Orestes to have brought back the image of Diana would have been a meaningless act, performed in ignorant obedience to the god's command. In realizing that he was intended to bring back his own sister, he comes to a final understanding of the transformation in himself. The unity and harmony he has been seeking in vain are not to be achieved with the help of the gods who lie outside him. The 'sister' is much closer to him than Diana; she is a member of his own family, almost a part of himself. From now on, Orestes shares something of Iphigenie's serenity, her Amazonian perfection, and now he also joins brother and sister in harmony after her example.

It would be absurd to claim *Iphigenie* as an example of Goethe's use of alchemical symbolism. Nevertheless the main

features of the plot do repeat the pattern to which we are now accustomed: there is the same resolution of the problem of suffering by 'death', and the same union of opposites, sun and moon, brother and sister, to provide a happy conclusion. The play is clothed, it is true, entirely in classical Greek form, but the fundamental idea in the background of Goethe's mind still succeeds in imposing its shape on the whole.

The heavenly Sophia was related to the mortal men in whom she came to dwell not only as a sister, but also in many other ways. This may serve to explain to some extent Goethe's preoccupation with themes involving the marriage or love of men and women closely related to each other, a preoccupation which has already come to light in *Die natürliche Tochter*. In that play the plot is extremely complex: the Duke has married his niece, and the King is apparently in love with the Duke's daughter, who is at once his niece and his cousin. This uncle-niece relationship is present again in *Der Gross-Cophta*, between the Marquis and his niece, although it is not here an important part of the play. It is also present in the story *Der Mann von 50 Jahren*, included in *Wilhelm Meisters Wanderjahre*, where it is not only important but once again extremely complex. Here the Major is in love with his niece Hilarie, while his own son, Flavio, is in love with the 'schöne Witwe'. At length, however, the Widow and the Major are attracted towards one another, and Flavio, to his horror, is cast out. He is driven almost to madness, and is only saved from utter destruction by the love of Hilarie, his cousin, who seems now to renounce her love for his father. But the change of her affection from the father to the son is too great for the girl, and just as the two young persons are about to fall in love, some terrible premonition warns Hilarie, and she withdraws. Flavio has called her 'sister'—as an endearment, it is true—but the name suddenly becomes for her a barrier between them, and the lovers are after all not united. The story ends on this uncertain and tragic note, and its numerous twists and turns are not easy to follow. Nevertheless, its theme is characteristic of others in the *Wanderjahre*. It is repeated in the story *Die pilgernde Törin*—not an original story but a translation—in slightly different terms. Here, a young woman arrives at the house of a certain Herr de Revannes, who

falls in love with her. Shortly afterwards his son follows his example, but the woman leaves having promised nothing to either. Thus once again the plot concerns the love of a father and a son for the same woman. Similarly, one of the themes of the whole novel is the love of Hersilie both for Wilhelm Meister himself and for his son Felix. As Hersilie remarks: 'There we go again—the father and the son!' [46] The theme is given another turn in *Die Wahlverwandtschaften*, for Ottilie, whom Eduard loves, is his adopted daughter, as well as his niece, and when he takes into his own custody the portrait of her father which she wears round her neck he seems to be half-consciously aware of the double nature of his affection for her. Mignon, too, in her song, calls Wilhelm 'Father' and 'Beloved', and her own parents, the Harper and Sperata, were brother and sister. All these stories seem to betray some problem which Goethe was constantly turning over in his mind, but which he could neither define clearly nor solve.

In most of these cases, the theme is one of love between two distinct yet related generations. If we omit the brother-sister themes, the rest can almost all be resolved into two forms: either the love of a father and a son for one woman, or the love of a woman for a father and a son. Both have the common element of love between members of the same generation, who at the same time look backward and upward to the preceding generation. Goethe himself states the theme in these abstract terms in *Paläophron und Neoterpe*. Paläophron, symbolizing time past, the former age, speaks of Neoterpe, the new time, the future, as his niece, and claims over her the rights of a father:

> Ich will nicht sagen, dass sie meine Tochter sei,
> Doch hab' ich stets als Oheim Vaterrecht auf sie. [47]

And if we examine the examples of Flavio, Felix, and the younger Herr de Revannes, it is clear that in each the situation of 'the sick prince' and the beautiful princess of the *Lehrjahre* is almost exactly repeated. Each is in love with a woman who may well become, and in one case actually does become, his father's bride. One may suspect therefore that this was the problem which Goethe was working out over and again. It had been stated once in the *Lehrjahre*, and a happy solution had apparently been reached, but he was dissatisfied with the result. The

Lehrjahre had not offered sufficient scope for thorough treatment, and the *Wanderjahre* therefore takes up the theme again. The problem itself appears to have been the reconciliation of two contradictory beliefs. The course towards perfection led to a symbolical marriage with the soul's bride; an integral union was desired between two parts of the soul which may perhaps be called the conscious and the unconscious. But at the same time this marriage appeared to involve 'incest': the bride was both sister and mother, and although the expressions were symbolical, they raised a barrier as insurmountable as real incest would have been.

Something of a clue to the explanation of this problem in Goethe's mind is provided by Hersilie's despairing comment. Drawn asunder by her rival affections both for Wilhelm Meister and for his son Felix, she compares herself to Alcmene, 'constantly haunted by two beings who represent one another'. [48] Which is Amphitryon, her true husband, and which Zeus, she cannot decide. There is thus the same confusion, so to speak, between the real and the ideal, as that which marks Goethe's treatment of the Urpflanze. The ideal is contained in, and represented by the real. Goethe took this belief so far as to suggest that God the Father was revealed and projected in earthly parents. [49] As Epimeleia says: 'O Vater du! Ist doch ein Vater stets ein Gott.' [50] In the same way Natalie, although almost a divine model of perfection, is yet a real person. So also perhaps, in the stories of the *Wanderjahre*, the older generation represents the Father or Mother, the parent, and hence also to some extent the divine lover, the companion of the 'higher marriage-bed'. The younger generation, Hersilie and Felix, Hilarie and Flavio, are meant for one another, their love is a love between equals, and yet they cannot escape the feeling of aspiration towards the love of God. This aspiration assumes so complex a form that at times, like Hersilie, they do not know for whom it is intended. Hersilie is so rapt in adoration of the son that she cannot distinguish him from the father. In *Der Mann von 50 Jahren*, the situation is yet further complicated when Flavio, who already bears a strong resemblance to his father, dons his father's uniform: 'for Hilarie the similarity between the portrait of the father in his youth and the living

presence of the son was uncanny, and even oppressive'. [51] Earthly love begins to become indistinguishable from divine love, and at the same time to engender horror. The lovers become conscious of a feeling of guilt, which they cannot overcome, since they tend to read the feelings of spiritual love into their everyday surroundings. Divine love becomes associated in their minds with incest, and they withdraw, horrified, from the barrier. But Goethe seems to suggest that, just as Wilhelm Meister overcame the barrier between himself and his 'father's bride', so also these later characters must overcome it if they are to attain to perfection.[1]

This is a problem which, in the present state of knowledge, can be treated only in a speculative fashion. The essential fact of Goethe's preoccupation with such themes as these seems almost certainly allied with his belief in alchemy, and needs to be pointed out. Moreover, his later work, and particularly the *Wanderjahre*, is especially rich in such strangely complex plots and imagery. Scarcely sufficient attention has been paid to this aspect of his work, and the profound self-searching which it implies. But we are not equipped today with an established language with which to interpret these stories. For the moment therefore one can only indicate the problem and suggest a possible solution.

Such a solution, or at least an approach towards its formulation, has recently been offered by Jung in a study devoted to the brother and sister symbols in alchemy and their relationship to psycho-analytical theories of incest. 'Incest,' he writes, 'the union of brother and sister, or mother and son, (is) a repugnant symbol for an *unio mystica*.' The grounds on which this statement rests will be obvious from the mystic beliefs already quoted in this chapter. Jung continues, however, by offering an alternative, though allied interpretation. 'Incest symbolizes the union with one's own being, the process of individuation or self-realization (Selbstwerdung), and has, in view of the great

[1] Hersilie's horror may be compared with the anguished dread (Angst) of Antigone, as Kierkegaard imagined it. In the version of the play which he sketched out, it was the realization of Oedipus' secret incest that inspired Antigone with dread, and thereby also gave her the possibility of 'freedom'. Horror of incest is thus one form of that dread which may lead to fuller knowledge of the divine. See Walter Lowrie, *Kierkegaard*, pp. 73-4.

and vital importance of the latter, sometimes an almost uncanny fascination. . . .' [52] These words, understood with reference to Goethe's later stories, bring into sudden relief the inward struggle of his later years.

The account of Goethe's interest in the symbolism of double-sex might be taken further. One might mention Montan's assistant at the end of the *Wanderjahre*, who is both male and female, or the Baroness who appears in the *Lehrjahre* dressed as a huntsman. There is a battle against real Amazons in Goethe's allegedly youthful story, *Der neue Paris*, [53] and another in the *Wanderjahre*, in which, as in all Goethe's conflicts of this kind, 'hatred and enmity at last dissolve in mutual, intimate assistance'. [54] By way of contrast, there is Kleist's treatment of the Amazon-theme in *Penthesilea*, and Goethe's unconcealed dislike for it—a dislike which is all the easier to understand when one recalls what the Amazon meant for him. One should also add that the word is sometimes used by Goethe in its more normal sense. Egmont calls Margarete von Parma 'a real Amazon' because she has a moustache and is subject to fits of gout. Iphigenie herself speaks of the Amazon race as a horde of avenging furies. It is usually possible, however, to distinguish such uses as these from the passages where the name obviously suggests perfection, and nothing is added by any of these examples to our knowledge of Goethe's symbolism.

The 'Amazon' is a typical product of Goethe's thought, which always sought out opposites, and then attempted to harmonize them in unity. His whole science illustrates this procedure. He always felt, as his essay on *Der Versuch als Vermittler* shows, that his method combined the subjective with the objective approach. It was always with a sense of delighted surprise that he spoke of his discoveries, as though he were not reading his theories into nature, but rather nature were coming to meet his theories. As he wrote to Frau von Stein in 1786 in reference to the Urpflanze: 'Everything comes to meet me, I no longer have to think about it.' So also in Italy, he spoke of the confirmation of his ideas concerning classical architecture: 'Everything becomes more defined, it develops and grows towards me.' [55] And again: 'Wie mir die Römische Geschichte entgegensteigt!' [56] Like the active and passive sides of his colour-cycle, which grew

towards their point of fusion in red, he felt that his own intuitive foreknowledge of what he would discover, and the facts of the outside world, reached out to meet each other and revealed in their union a higher form of truth. He quoted with pride the comment of a friend that he combined the imaginative insight of Plato with the empirical exactness of Aristotle. [57] His ideal was a delicate empiricism, 'eine zarte Empirie', which should deny neither the imagination nor the reason, neither the poet nor the scientist, their rights, but should, by a developing or heightening of the spiritual faculties, 'identify itself with the object of its inquiry'. [58] It is not difficult to associate this idea with the alchemical ideal of perfection, although Goethe extends its use far beyond the limits to which it was taken by the alchemists.

As in Goethe's science, so also in his moral ideas. The colour red has been seen to symbolize the combination of the temporal qualities 'before' and 'after': it is momentary in the extreme, almost beyond time. So also, when Faust is married to Helen, it is this enjoyment of the moment that Goethe emphasizes:

FAUST: Nun schaut der Geist nicht vorwärts, nicht zurück,
Die Gegenwart allein—
HELENA: Ist unser Glück.
FAUST: Schatz ist sie, Hochgewinn, Besitz und Pfand;
Bestätigung, wer gibt sie?
HELENA: Meine Hand.

The present moment is precious not for any hedonistic reason, but because by living in it all sense of before and after disappears: 'the spirit looks neither forward nor backward.' In the poem *Vermächtnis*, Goethe praises existence in itself for the same reason: 'Am Sein erhalte dich beglückt! Das Sein ist ewig. . . .' With this knowledge in mind, he continues, it is possible to find 'the centre':

Das Zentrum findest du da drinnen,
Woran kein Edler zweifeln mag,[1]

and at this point of perfect unity, in which moral actions proceed of themselves from the enlightened conscience, past and present become joined in the 'eternal moment':

[1] See p. 197 above.

Dann ist Vergangenheit beständig,
Das Künftige voraus lebendig,
Der Augenblick ist Ewigkeit.

Thus once again, as so often happens, the 'finding of the centre' becomes synonymous with the union of opposites. Morality ceases to be a choice between good and bad, and becomes a matter of action in accordance with pure being. At this point of minimum time, good and evil cease to exist as opposites, just as the representatives of light and darkness cease to exist in the colour red.

Wherever one turns in reading Goethe, one encounters the same desire to synthesize all opposition. He speaks of combining the 'upper world' and 'the lower', the conscious and the unconscious, the ideal and the real, the authority of traditional beliefs with the individualism of personal observations. At the end of the *Wanderjahre*, he speaks of uniting the purely mystical attitude of Makarie, who spends her life in contemplation and visionary intuitions, with the rough matter-of-factness of Montan, who is devoted entirely to scientific empiricism. 'To balance these two worlds one against the other', he concludes, 'to make manifest the characteristics of them both in this transitory life, is the highest form of existence towards which man has to develop.' [59] There can be little doubt that the Amazon was intended to represent just such a synthesis as this. Her maleness and femaleness embraced all the opposite categories of systole and diastole; like the Stone of the Philosophers her harmonious perfection was the result of a unity and wholeness which resembled, on a microcosmic scale, the unity of the One and All.

There is, however, almost no suggestion that Goethe believed the Amazon to be an attainable ideal. It is true that Wilhelm and Natalie are promised in marriage at the end of the *Lehrjahre*. But the marriage itself is postponed beyond the final page, and when Wilhelm is seen again, at the beginning of the *Wanderjahre*, he is already separated from Natalie. In the original version of the latter novel he does see her once from a great distance, but in the revised version she is mentioned only as the recipient of his letters, and the book ends without his ever having met her again.

CHAPTER XI

CONCLUSION

THE last quarter of the eighteenth century saw the renaissance of mystical and quasi-mystical beliefs of all shades. Spinoza, Plotinus, Plato, Boehme, Swedenborg and Cagliostro jostled one another for popularity, and the interest evoked by the least reputable of these cannot be divorced from that aroused by the true philosophers. Occultism was rife in many intellectual circles, and there was a certain sympathy for it even among the most serious thinkers of the age. In a movement which tended towards the irrational, the occultists represented the lunatic fringe. In this stream of metaphysical speculation belief in alchemy was, however, relatively unimportant: it was one means among many of satisfying spiritual needs. Nevertheless, the fact that it could attract so strongly the greatest genius of the era, the most insistent apostle of restraint and reason, demands some evaluation both of alchemy itself and of Goethe's attitude towards it.

Alchemy, as Goethe came to know it, was professed mainly by Christian teachers: it was one branch of that mystical Pietism represented by Boehme, Gottfrid Arnold and Susanna von Klettenberg. There was nothing contradictory in this association with Christianity. The fundamental ethical idea of the alchemists, that the way to a higher life lay through the strait gate, is fundamental also to the Christian religion. But it is not an exclusively Christian belief. Where the Christian differs from other believers is in his insistence that the way was shown by divine example: by the self-sacrifice of God at a historical point in time. This is not a part of alchemical doctrine, although it is possible to introduce it there, as the Pietists observed. In fact, one is inclined to look for the origins of alchemy not in Christianity but in the Orphic mysteries and their developments in Greek philosophy. Regarding alchemy as a whole, and including the Arabs, Greeks, Chinese, and non-Christian Europeans

who practised it, it is seen to be an expression not solely of Christianity, but of the so-called 'perennial philosophy'. Here its true affinities lie. A Christian like Boehme might adopt the alchemical doctrines revealed to him by his learned friends, just as Reuchlin could demonstrate the Christian teachings of the Cabbala, and each was able to believe that occultism was merely one aspect of his own faith. But it is possible to identify occultism with Christianity only by omitting from the latter its belief in Christ as the Saviour.

Many occultists in Goethe's time reversed Boehme's procedure, and sought to include Christianity as a branch of their philosophy. Christ, in their teachings, becomes an initiate of the higher mysteries who attempted by personal example to make them understandable to all men. For them, he is no longer the Son of God but a son of God. Some may revere Christ as the supreme model, others may declare themselves to be the only true Christians, but there is always a tendency to believe that each individual must, like the initiate in a mystery, undergo his own temptation, trial, death and rebirth. Individual experience counts more with them than organized religion, and they reject the idea that Christ's death brought redemption once and for all. So also Goethe, in his account of his youthful religion, seems to accept the Christian idea of redemption: 'nothing is more natural, in this sense, than that the Godhead should itself assume the form of man.'[1] But he adds that the history of 'all' religions and philosophies teaches this great truth, and that the act of redemption 'must renew itself throughout the whole time of being and becoming'. Goethe thus grows away from the alchemical Pietism of his early teachers, and seeks to give it a more universal significance. In doing so he reflects the trend of occultism in his age.

This attempt on the part of occultists to free their teaching from any limitations of time and place, their denial of the single, historical self-sacrifice of God, leads inevitably to ambiguity. At bottom their philosophy is a symbol in the Goethean sense, a means of expressing the nature of the universe in the most general form. There are Asiatic priests who achieve something of a similar kind by the repetition of the syllable 'Om'. In the

[1] See p. 52 above.

parting and rejoining of the lips, the release and control of breath, is contained the whole symbolism of systole and diastole. The alchemical formula might be expressed in the same way. There is an initial, indefinable point from which arises the dual multiplicity of things. Thence, like the twin arms of a figure 8, the Creation moves ever farther apart. To achieve peace and concord again, the arms must come together towards the unity represented by their point of intersection. Henceforward, the duality which exists as the arms emerge from the 'cross' is said to be in a higher sphere, and it in turn is at length joined in a final, indefinable point, whence the whole process may begin again. A true symbol, this pattern is capable of innumerable interpretations. But while the neatness and universality of the pattern can at times afford pleasure, the very ambiguity causes equal dissatisfaction. This dissatisfaction arises as soon as any attempt is made to see how the pattern takes shape in the objective world. So long as one is content to say 'Om', the universe holds no problems. Once interpretation begins, one is confronted with the vast and often contradictory variety of behaviour which alchemy and occultism inspire in their adherents. For Fräulein von Klettenberg, the process of 'Nigredo', the descent into Hell, meant the complete renunciation of earthly pleasures, of love and dancing and fine clothes, and the annihilation of self-will. In other Pietists who derived their beliefs from the same source, but who were less ascetically or mystically inclined, it took the form of acute repentance and contrition. At the other extreme stands Arthur Rimbaud, in his youth an equally fervent believer in the truth of alchemy. If Miss Starkie is to be believed, his interpretation of this doctrine was *Une Saison en Enfer*: self-conscious indulgence in the extremest forms of depravity in order to humble the sense of individuality. 'Everything is good that breaks down the control of reason'—alchohol, drugs, sexual licence—'everything that can lift the human soul out of its mortal shell and plunge it into eternity'. [1] So also Boehme, Swedenborg and Blake belonged to the same tradition, yet each derived totally different conclusions, and each was convinced of his own infallibility. In politics, occult and mystical beliefs could inspire both the Holy Alliance on the one hand, and the Freemasons and Carbonari on

the other. Revolution and reaction could both turn to the same system for support. In a yet broader field, the ideal of 'Stirb' und werde' has, in the last century, been taken from Goethe's hands and stripped of any Christian implications which it still had. Applied solely to the problems of the national State, the idea of self-sacrifice and assumption into the whole has paved the way for demagogues and mass-obedience. What alchemy and occultism provide is thus not a practical code but a pattern of emotional attitudes. They resemble a passage of music whose truth may be felt, but which cannot be translated into a moral law or a scientific argument. The experience cannot be pinned down with words, and the attempt to do so inevitably distorts the meaning.

The vagueness and ambiguity of alchemical doctrines resides in their disregard of facts—or perhaps it is better to say, since facts can be of more than one kind, in their lack of objectivity. This could lead to such absurdities as Kirchweger's attempt at demonstrating the Creation of the world, and one suspects that the normal run of alchemical experiments were, from any objective point of view, equally valueless. The important thing was that the red deposit or the lily-white powder should appear, and the alchemist was not concerned to ask whether it had come by lucky accident or from logical necessity, or whether it was 'in fact' there at all. But so long as it was possible for each adept to take over the system of beliefs from his predecessors and to invent such practical proofs as he chose, the alchemists were in fact denying a basic part of their ideas. For all their praise of the union of opposites, they ignored one essential pair, the subjective and objective methods of investigation. Their symbols therefore became mere tokens, unrelated to that which they represented. Goethe's work, on the other hand, attempts to restore the balance. By insisting, in theory at least, on the objective and verifiable proof of the alchemical doctrines, he sought to restore to them the factual content which alone could make them into true symbols, potentially universal and individually precise.

The same one-sidedness is found in the religious teachings of the alchemists. For all its irrationality, there appears to be a thread of logic running through the system. Peace, it is said, is

only to be found in unity, in union with the infinite One. Thence it appears to follow that peace can only be achieved by the annihilation of individual separateness, by the 'death' of alchemical literature. But in fact the word must always be written in inverted commas, unless it is to mean no more than that death heals all ills. However much the alchemist might preach renunciation, he could not be free of the body so long as he drew breath; he was physically incapable of throwing off his nature as an individual. He might successfully create in himself the illusion of impersonality, or he might attempt, in his normal waking life, to approach an impersonal code of action, but he would always remain himself. Faced with the choice of gaining his own soul or gaining the whole world, he asserted that it was possible to take both ways at once, to combine earth and heaven in one. It is platitudinous to reply to this that you cannot have your cake and eat it. The important question is whether the apparently impossible is after all possible, and the alchemists made no attempt to answer this. They could not have shared with Goethe the experience which made him write: 'Am Sein erhalte dich begluckt', or that final declaration of faith in humanism: 'Wie es auch sei, das Leben es ist gut.' Things, facts, this world, human suffering or human joys meant nothing to them, and just as subjectivity governed their practical experiments, vitiating all claims to have created the Stone, so quietism predominated in their religious beliefs and encouraged the illusion of peace.

For all their illogicality, however, and perhaps in part because of it, alchemy and occultism, as distinct from pure mysticism, exert a curiously strong influence on imaginative writers. For these, the irrationalism is of less account than the authority of an ancient tradition; the system of beliefs appears to offer to them a satisfactory account of the universe. Occultism continues to exert its fascination, and frequently makes its unexpected appearance amongst the leading writers of the present day. The reason for this fascination is to be found in the alchemist's preoccupation with processes deep down in the mind. At some time in the past, one feels, these must have been examined and described in some detail by men who felt that the knowledge thus acquired could be handed on only in a symbolical form.

Beneath this cloak, however, the lore of the unconscious could be communicated in great complexity, and in a garb not unsuited to the subject. Once the mysteries of alchemy are uncovered, they lose much of their attractive power. The elemental forces which are their subject-matter appear harmless in the daylight of rational discussion. But so long as alchemy is read in terms of itself, and is permitted to wield the suggestive influence which it has, one is aware of the tumultuous, wriggling, protoplasmic life beneath the surface, the knowledge of which the alchemists propagated.

It was probably this side of alchemy which attracted Goethe. It has been seen how, in his description of the plant, he regarded the limitation of the calyx as a necessary preliminary to the release of the 'plenitude of the innermost depths'; and how Wilhelm Meister, rejoicing at the great assembly of subterranean flames, saw revealed the 'gleaming interior' of the mountainside. These were in part the fruits offered by the alchemists to those who visited the bowels of the earth, and in this respect the teaching of alchemy may be described as the apotheosis of the unconscious. But once again Goethe draws circumspectly on his knowledge of this doctrine. He was aware that the power thus to be gained was Janus-faced: the 'central spark' might exercise arbitrarily a divine or a demonic force. His reflections on the subject are, I believe, contained in the suitably obscure *Weissagungen des Bakis*, particularly in the verses which begin:

> Eines kenn' ich verehrt, ja angebetet zu Fusse;
> Auf die Scheitel gestellt, wird es von jedem verflucht.
> Eines kenn ich, und fest bedruckt es zufrieden die Lippe:
> Doch in dem zweiten Moment ist es der Abscheu der Welt.[1]

Whatever may have been in Goethe's mind as he wrote these lines, it is clear that he is speaking of the horrible ambivalence of some sacred emotion. That which is normally worshipped as holy can become in the twinkling of an eye a monstrous horror, 'the eternal serpent is discovered suddenly to be full of maggots'. It is possible indeed, although the suggestion is made with the

[1] One thing I know that's revered, yea, worshipped when it stands upright;
Yet when inverted it breeds naught but reviling and fear.
One thing I know and it makes the lips to close in contentment;
Yet in a moment of time it turns to the horror of men.

utmost deference, that the opposites of which Goethe was thinking, whose symbols are reciprocally transformed by a simple reversal, were the crucifix and phallus, the interrelation of which has often caused pain and conscience-searching to sincere mystics. An interpretation of this kind would be in keeping with the feeling of the poem as a whole, and is supported by the ensuing verse, which reads:

> Dieses ist es, das Höchste, zu gleicher Zeit das Gemeinste;
> Nun das Schönste, sogleich auch das Abscheulichste nun.
> Nur im Schlürfen geniesse du das, und koste nicht tiefer:
> Unter dem reizenden Schaum sinket die Neige zu Grund.[1]

The fundamental suggestion, that the most holy is closely allied to the most repulsive, cannot be escaped. Goethe therefore urges circumspection. The contents of the cup which grants power are, like the deadly poison of the Elixir of Life, capable of destroying the drinker: like the Sorcerer's Apprentice he evokes forces which he cannot control. Thus once again, while Goethe accepts the teaching of the alchemists as basically true, he is aware of its limitations and dangers, and withholds from it his full allegiance.

This, then, was Goethe's attitude towards alchemy. He took over from the alchemists intact their symbolical pattern, and used it throughout his life in a multiplicity of forms. These could be as various as those of the Urpflanze, the *Märchen*, and the Colour-Theory, while the pattern also appears to be present, although in a less rigid form, in *Iphigenie*, *Faust II*, and perhaps in the general outline of the *Wanderjahre*. As I have tried to show in the last three chapters, it also formed an essential part of Goethe's feeling for his own moral and spiritual development. The Urpflanze may not have been the key to the universe which Goethe believed it to be, but it is a valuable key to Goethe himself. When one considers the importance which Goethe attached to his scientific work, particularly to the Colour-Theory, of which he repeatedly said that it meant more to him than all his poetic works; and when one recalls that the symbolism of the

[1] Thus it is both the highest, and yet at the same time the crudest;
Now the most lovely of all, now the most horrent of things.
Sip at the cup but slowly, nor seek to taste deeper;
Under the tempting froth is nothing but bitterest dregs.

Colour-Theory is incomprehensible without reference to alchemy, one appreciates the enormous respect which he had for the teachers of his youth, a respect which endured from his twentieth year till the time of his death. In the course of years he became acquainted with other philosophies, with Spinozism, Neo-Platonism, and the religions of the East. It would be possible to trace in these, in a more lucid and reasoned form, many of the beliefs which Goethe must have sensed inchoately from his alchemical studies. But he never accepted these philosophies so entirely as he accepted the philosophy of alchemy. He was never a Spinozist or a Kantian to the same extent as Herder or Schiller. Rather, he took from other philosophers so much as would clarify and develop his ideas, so that they could be applied to specific fields of knowledge, to ethics, epistemology and religion. At the same time, his most deep-seated convictions had originally sprung from the occult tradition alone.

Against this confidence in the wisdom of the alchemists must be set Goethe's profound mistrust and dislike of their methods and conclusions, feelings inspired first of all by Herder's mockery. Despite his debt to occultism, Goethe rarely spoke of the occult, and when he did, it was almost always in terms of disparagement. The studies which occupied his mind were concerned with the clear and rational, above all with classical Greece, and his life was spent not in the phantasmagoria of the alchemical laboratory, but surrounded by the images of Zeus and Juno. His study of science goes hand in hand with his study of Greece. Both were intended to counteract the too insistent urge towards the dark powers. Science and Greece meant clarity and objectivity, and by devoting himself to them Goethe hoped to achieve a synthesis beyond any the alchemists could have attained. He could see in his own times where pure speculation might lead. On all hands the Romantic Nature-philosophers were propounding systems whose only claim to merit was that they were mystical. Contemporary scientific works were being ransacked for religious analogies by men who knew next to nothing of science, and while Goethe was clearly in sympathy with their aims he could not condone their methods, which are scarcely distinguishable from those of the alchemists themselves. Hence his constant criticism of everything that

tended towards mysticism. His emphasis lies always on the here and now, on what can be seen and felt and touched. As Jarno says in the *Lehrjahre*, referring to the sect of Pietists to which Fräulein von Klettenberg belonged: 'Hier oder nirgends ist Herrnhut'—the doctrines of the Herrnhuter need to be divested of their other-worldliness and applied to the problems of everyday life. In the same way, Goethe intended to show, by means of verifiable facts, that knowledge of a spiritual world can best be gained through our perceptions of the real world, which it invests and informs in every atom. Here the distinction between Goethe's science and both alchemy and modern science becomes clear. Modern science has taken over from alchemy only its concern with practical experiment, and has rejected the mystical philosophy on which it was based. Goethe accepted the philosophy and began to develop the respect for empiricism, which, though theoretically essential to alchemy, had been entirely neglected.

In his literary works, the same attempt at a balance between the rational and the irrational is evident. It is this which makes such books as *Die Wahlverwandtschaften* and the *Wanderjahre*, for all their deficiences of form, still fascinating. As, in the *Metamorphosis* essay, one becomes aware that more is being described than the simple life of the plant, so too, beneath the calm, civilized surface of a story like *Der Mann von 50 Jahren*, one senses the driving urge of elemental forces. The wild beast, whose pursuit and taming form the subject of Goethe's *Novelle*, is half unleashed for a moment, and it is 'as though the evil spirits, transformed over and again within their element,—were seeking here and there to plunge up again out of their flames'. [2] On such occasions one realizes more fully what Goethe meant when he spoke of restraint. Blake, who derived his beliefs largely from the same sources as Goethe, wrote that 'those who restrain desire do so because theirs is weak enough to be restrained'. Desire, in Blake's language, can be equated with that flooding up of inward forces which Goethe also knew. But it cannot be said that Goethe was capable of restraint because his desire was weak, nor did Blake's prophecy, that desire so restrained would become passive and the shadow of itself, prove true in Goethe's case. Like Blake, he was aware

that these forces do not belong to what is usually called the divine, and that those who make use of them may be 'of the Devil's party without knowing it'. But in the person of Faust he made this pact with the Devil deliberately, believing perhaps, again like Blake, that the Devil was the true form of the Messiah. Where Goethe differed from the Englishman was in his deep-seated knowledge that the pact was infinitely dangerous, and that without the counterbalance of reason it could lead to total disaster. He restrained his desire because it was strong enough to need restraining.

Like the alchemists, however, Goethe failed in his scientific practice to achieve the synthesis he proclaimed in theory. In spite of claims to the contrary—claims which all the Nature-philosophers made—his method was first to set up a system and then to look for confirmatory evidence. With his considerable, though not complete respect for facts, he was able at times to maintain his symbolical pattern with a plausible show of argument. Yet he must have known that his theories were at best a compromise. He was fully aware that his Urpflanze, for example, could not be strictly regarded as a model of all plant-development, and would answer criticisms by saying simply that other facts lay 'outside his range of vision'. He was capable of closing his mind entirely to opposing views so that when Eckermann expounded to him, with due deference, a flaw which he had detected in the Colour-Theory, his brow grew dark and his expression stony. Behind this attitude there must have been some realization that the theories were incomplete. But since his early days Goethe had needed above all certainty. The wild urge which drove him on in his youth would rest content with nothing less than an explanation of the whole universe. One of his chief criticisms of the method of Francis Bacon was that it took too long: the gradual, patient amassing of evidence, from which at the end of a lifetime perhaps nothing would emerge, was for him psychologically impossible. He needed certainty within a lifetime, otherwise he would have gone the way of Heinrich Wagner, Gerstenberg and Leisewitz, and the rest of the 'Stürmer und Dränger', who either died young or quickly became unproductive. He had to come to terms with the world, even if it meant some abandonment of his integrity

as a man and a scientist. He therefore marked out his ground in a broad sweep, called it the world, and held to it for the remainder of his life. It was a wide sweep, and at times bore a deceptively close resemblance to the world of reality. Such doubts as may at length have arisen in his mind would have had to be stilled.

The virulence of his polemic against Newton is a measure of the extent to which Goethe felt his position threatened. To have renounced the Colour-Theory would have been more than the confession of an error, it would have brought half his life tumbling in ruins. So much had been established, the view of Nature he had built up seemed so comprehensive, that it appeared incredible he should be totally mistaken. It was better then to believe in some life-giving compromise, to arrive at some positive conclusion even at the expense of many facts, rather than to remain in a permanent state of indecisive pondering in the face of the complex variety of things. His belief in his theories was akin to an act of faith, a religious conversion. Not all the facts could be known or effectively included; it was necessary therefore to take some leap in the dark. The impulse to make this leap sprang from what he quite openly called 'prejudice'. 'In thought as in action, prejudice decides all, and prejudice, as its name implies, is a judgment before examination. It is the affirmation or denial of whatever appeals to or contradicts our nature; it is the joyful impulse of our living self towards truth or falsehood, towards everything with which we feel ourselves in harmony.' [3] To deny this prejudice would be to stifle his own life. But at the same time, to affirm it could lead equally well to 'truth or falsehood', and in fact the second element predominated. 'Prejudice' increasingly gained the upper hand, so that towards the end of his life Goethe relied almost entirely on the imagination, and became less and less mindful of facts. In his urgent desire for integration he lost his integrity. The firm foothold which he established was no foothold at all, but a victory for irrationalism and the need to arrive at a synthesis.

The question at stake in any discussion of Goethe's science is the validity of the artist's conscience. Goethe believed that an artist or for that matter a scientist, who was fully awake to all

the facts and did not attempt to impose his will upon them, would be led by an inward impulse inevitably to the true and the beautiful. This impulse would be as it were a manifestation of a higher power, which lay dormant until released by the fullest renunciation on the part of the artist, but once released would guide him along its own true paths. All art must surely be created in accordance with such ideas, though the religious and psychological interpretations may vary. The supreme example of such artistic conscience is Cézanne, who would, in his integrity, leave blank on the canvas all those portions that he could not truly 'see'. It is this attitude which gives his paintings the mark of genuineness. In literature the same attitude is required, although here the blanks are commonly filled in by the time of publication. No poet publishes his work interspersed with blank lines, though he may have many unpublishable fragments. And once the blanks are filled it needs a practised ear to discover any lines which may have been inserted in impatience or despair. The same must also be true of Goethe's science. With him too that 'impulse of our living self' was to lead to truth, yet, as he clearly states, it might equally well lead to falsehood. The saving factor is the artist's conscience, or that which Stefan George called the 'alloffenen Blick'. Vividly awake, this fashions truths which are felt in the heart of every attentive spectator or listener. But, I say with reluctance, Goethe's science was not formed on this pattern. In science, he could be wilfully blind in a way he would never have tolerated in poetry. His conscience was only half awake, he was prepared at times to do open violence to the facts as he knew them. It is as though, for the sake of a completed picture, Cézanne had been prepared to fill in the blanks by guesswork, or as though Goethe himself, in his poems, had been willing to pad out his verses with random words. Because of this, his science lacks the immediate appeal of genuineness.

On the other hand it can be argued that the conscience, whatever form it may take, is a negative thing and that a final synthesis is beyond man's powers. This was almost certainly Goethe's view. Two ideas characterize his whole endeavour: on the one hand his insistence on the need to employ the whole of man's faculties, the systolic rational and the diastolic irrational,

in the search for truth; on the other hand his realization that, given human limitations, the task was an impossible one. The irrational, imaginative part of him saw analogies between all things: left to itself it would quickly have abolished all distinctions. The unity which it seemed to discover, however, would be entirely subjective. Reason, its limiting counterpart, broke up and dissolved the analogies, denied their existence, and thus equally prevented a unitive view of the world. Yet without the irrational, life would be impossible, and without the rational it would burst with its own impetuosity. The choice was thus between a comprehensive but possibly baseless belief, and no belief at all. In the event, Goethe chose to believe, or better, his nature led him towards affirmation. He preferred to reclaim the land, to cultivate the fruitful soil of belief, rather than to cast himself adrift on the ocean of doubt. He was aware, however, that such reclamation work was in the long run insufficient. As in *Faust*, the dam which held back the sea had been built by magical, that is, by irrational means, and there is something of Goethe's own tragic sense of inadequacy in the lines:

> Noch hab' ich mich ins Freie nicht gekämpft.
> Könnt' ich Magie von meinem Pfad entfernen,
> Die Zaubersprüche ganz und gar verlernen,
> Stünd' ich Natur, vor dir ein Mann allein,
> Da wär's der Mühe wert, ein Mensch zu sein.

Having believed in magic all his life, he now confesses that his foothold is valid only if magic ceases to impose its help. The firm ground gained is at best a means of clinging to existence and the final synthesis lies beyond the transitory world. The concluding lines of *Faust* indicate the ultimate humility in Goethe's attitude.

REFERENCES

[For a list of abbreviations used see p. 298.]

CHAPTER I

[1] Cp. Read, *Prelude to Chemistry*, p. 307.
[2] Figuier, *L'Alchimie et les Alchimistes*, ch. VI.
[3] Adolf Kistner, *Mannheimer Stadtrat und Kurpfälzische Regierung gegen das alchemistische Laborieren, 1753*, in Ruska, *Studien zur Geschichte der Chemie*, p. 109.
[4] *WA.* I. 27. 203-4.
[5] *Ibid.*
[6] *Ibid.*
[7] *Ibid.*
[8] P. Zimmermann, *Goethes Briefe an E. Th. Langer*, p. 28: 'Und dann, such ich unter der Hand, mir eine kleine Literarische Kenntniss *der* grosen Bücher zu verschaffen, die der gelehrte Pöbel theils bewundert, theils verlacht, und beydes weil er sie nicht versteht: deren Geheimnisse aber zu ergründen nur ein Pekulium für den empfindsamen Weisen ist. Lieber Langer, es ist doch würcklich eine Freude, wenn man iung ist und die Insuffizienz des grössten Theils der Gelehrsamkeit eingesehen hat, noch auf so einen Schatz zu stossen. O es ist eine gar lange Reihe, von Hermes Tafel, biss auf Wielands Musarion.'
[9] The *Ephemerides*, *WA.* I. 37. 81 sqq.
[10] *WA.* I. 27. 308. (*Dichtung und Wahrheit.*)
[11] *WA.* I. 27. 39. (*Dichtung und Wahrheit.*)
[12] *Ephemerides.*
[13] *Ibid.*
[14] See Keudell, *Goethe als Benutzer der Weimarer Bibliothek.*
[15] *WA.* I. 27. 217. (*Dichtung und Wahrheit.*)
[16] 'eine Beschreibung von dem Ursprung der Natur und natürlichen Dingen, wie und woraus sie geboren und gezeuget, auch wie sie in ihr uranfängliches Wesen zerstöret werden, auch was das Ding sey, welches alles gebäret und wieder zerstöret, nach der Natur selbst eigner Anleitung und Ordnung auf das einfältigste gezeiget, und mit seinen schönsten rationibus und Ursachen überall illustrirt.'
[17] *A.C.H.* p. 93: 'wie die Natur in particularibus arbeitet, also arbeitet sie in universalibus.'

[18] Quoted in Read, *Prelude to Chemistry*, p. 73. My italics.

[19] *A.C.H.* ch. x.

[20] *A.C.H.* p. 56. (abridged here):

Nitrum	*Saltz*
Acidum	Alcali
Spiritus	Corpus
Vater	Mutter
Männlicher Same	Weiblicher Same
Agens Universale	Patiens Universale
Himmel und Lufft	Wasser und Erde
Der Stahl	Der Magnet
Der Hammer	Der Ambos.

[21] *A.C.H.*, ch IV:

Himmel	Wasser
Luft	Erde
Vater	Mutter
Agens	Patiens
subtil	grob
klar	finster
flüchtig	fix

[22] *A.C.H.* p. 59.

[23] *RR.* p. 289.

[24] *A.C.H.* p. 241: 'Nun wollen wir . . . (das Wasser) in seine Theile zertheilen und separiren, solche per artem Vulcani examiniren und ihre Wirckung in etwas . . . anatomieren, solviren, zerlösen, separiren in seine partes volatiles, medias et fixas, solche separirte Theile dann wieder zusammen conjungiren, coaguliren, und figiren, damit jeder sehe, wie das allerflüchtigste kan fix gemacht werden, das fixe aber flüchtig, der Himmel zur Erde, das Volatile zum Acido et Alcali, et vice versa, dadurch eine Harmonia concentrata, Quinta Essentia, oder Magisterium Universi heraus komme.'

[25] *A.C.H.* p. 269.

[26] *A.C.H.* ch. v.

[27] *A.C.H.* p. 254: 'Jetzt mercke wohl das Exempel, denn nach diesem reguliren sich alle Animalia, Vegetabilia und Mineralia, dass sie erstlich putreficiret werden, dann separiret, rectificiret, und wieder coaguliret, figiret, und in ein corpus gloriosum pellucidam regeneriret.'

[28] *A.C.H.* ch. x: 'Durch was ein Ding natürlich gemacht ist, durch eben dasselbe muss es in seine Natur wieder zurückgehen, resolvirt und zerbrochen werden.'

[29] *A.C.H.* p. 180: '. . . aus wem etwas entspringet, in dasselbe muss es wieder resolvirt und reducirt werden.'

[30] *A.C.H.* p. 315: 'Denn einmal ist gewiss, dass die gantze Natur im Anfang ein Wasser ware, und durchs Wasser ist alles geboren worden, und eben durchs Wasser . . . muss alles wieder zerstöret werden.'

[31] *A.C.H.* p. 186: 'Aus diesem sehe der Liebhaber abermal und soll wohl merken, dass durch die circulation . . . alle und jede resolvirte Dinge in primam materiam oder chaotisches ∇ zurück gehen.'

[32] See Read, *Prelude to Chemistry*, plate 13.

[33] *Ibid.*

[34] *RR.* p. 289.

[35] *RR.* 'An Exposition upon Sir George Ripley's Epistle to King Edward IV', p. 3.

[36] *RR.* p. 212.

[37] See Read, *Prelude to Chemistry*, pp. 14 and 16.

[38] See C. G. Jung's description of the process in *Die Erlösungsvorstellungen in der Alchemie*, p. 14.

[39] Hopkins, *Alchemy, Child of Greek Philosophy.*

[40] *O.M-C.* Vorrede des Autoris: '. . . dass unser Vorhaben nicht dahin gerichtet, dass wir jemanden wolten Gold machen lehren, sondern unser Absehen geht auff etwas weit höheres, nemlich, wie die Natur aus Gott, und wie Gott in derselben möge gesehen und erkannt werden.'

[41] *Ibid.* 'nein, sondern wir wünschen von Hertzen, dass alle Menschen, an statt des Goldes, Gott suchen und finden mögten.'

[42] Valentine, *Von dem grossen Stein der Uhralten*, p. 1: 'unser Eckstein und Felss.'

[43] Robert Fludd, *Philosophia Moysaica*, Title-page.

[44] H. Khunrath, *Vom hylealischen . . . Chaos.* p. 17: 'Weil GOtt der HErr durch Lapidem Philosophorum, im grossen Buch der Natur, Fürbildungs-weise, IHSUM CHRISTUM lässet andeuten, so mag ich auch billich die Wort Esaiä des Propheten von CHRISTO, die wunderbare harmoniam und Übereinkunfft dieser Beyder Steine . . . daraus etlicher massen zu erweisen, wol und gar bequemb allegiren . . . .'

[45] *O.M-C.* p. 31: 'wie nemlich der gefallene und durch die Sünde und Verderben in die Fäulung gegangene Mensch durch das süsse fixe Saltz der stillen sanften Ewigkeit Christum JEsum gezeuget . . . (und) fix und beständig erhalten werden müste.'

[46] *KKH.* II, 1161: '(also) ist Christus auch der himmlischen Lieblichkeit des Rubin oder Carfunckel-Steins.'

[47] *Von dem grossen Stein der Uhralten*, p. 24: 'mit seinem rechten Namen aber wird es nach zeitlichem Verstande genandt ALLES IN ALLEM.'

[48] C. G. Jung and R. Wilhelm, *The Secret of the Golden Flower.*

[49] E. Underhill, *Mysticism*, p. 397.

[50] Oswald Croll, *Philosophy Reformed*, p. 214.

[51] Reprinted in *The Hermetic Museum*, vol. I.

[52] H. Dechent, *Goethes schöne Seele*, ch. VI.

[53] H. Funck, *Die schöne Seele*, p. 282: 'Ich Habe ein aurum potabile Empfangen, einen Unverwesslichen Tropfen genossen, der bildet alles um, der Gestaltet mich,—so wie mein Haubt, zur rechten der Mäjestet Gestaltet ist.' (Letter of 12 Sept. 1774.)

[54] Basil Valentine, *Vom Stein der Uhralten*, p. 68: 'so wirstu sehen, dass das Irdische vom Himlischen mit Leib und Leben verzehret, und der jrrdische Leib in ein Himlisches wesen eingangen.'

[55] A. J. Hopkins, *Alchemy, Child of Greek Philosophy.*

[56] A. E. Waite, *The Secret Tradition in Alchemy.*

[57] A. J. Festugière, *La Révélation d'Hermès Trismégiste*, p. 219.

[58] *Isaiah*, I. XXV.

[59] Quoted in E. Underhill, *Mysticism*, p. 244.

[60] *O.M-C.* p. 237: 'also dass, nachdem derselbe durch den zeitlichen Tod seine unflätige stinckende ♎ [i.e. sulphurous] Schaale, in welcher er durch seine satanische Imagination gekrochen, abgelegt, derselbe in seiner erst-geschaffenen herrlichen Gestalt, GOtt seinen Vater durch Christum wieder dargestellet werden könne.'

[61] Zimmermann, *Goethes Briefe an E. Th. Langer*: 'ich habe gelitten, und binn wieder frei, meiner Seele war diese Calcination sehr nütze.'

[62] *RR.* p. 339.

[63] See the *Ephemerides*, *WA.* I. 37. 97.

[64] J. de B. Louvigni. *Das verborgene Leben mit Christo in Gott*, p. 139: 'Das innere Feuer muss sorgfältig zugedeckt und verborgen gehelten werden. Wenn man versäumt, von Zeit zu Zeit Holz aufzulegen, das ist, durch öftere Herzenserhebungen, und immerwährende Aufblicke zu Gott dasselbe zu unterhalten . . . so ist es in Gefahr zu erlöschen.'

[65] *The Hermetic and Alchemical Writings of Paracelsus the Great*, ed. A. E. Waite, vol. I, p. 152.

[66] See Silberer, *Probleme der Mystik*, p. 163.

[67] *RR.* 'An Exposition upon Sir George Ripley's Epistle to King Edward IV', p. 31.
[68] Quoted in *KKH.* II, 433: 'ein kleines fünklein des ewigen unsichtbaren feuers.'
[69] *KKH.* II. 1370: 'Insgemein ist Centrum der innerste Grund jedes Dinges, dahero unterschiedliche Centra sind. Im Menschen ist das Centrum GOtt selbst, oder das verblichene Bild GOttes.'
[70] *O.M-C.* p. 77.
[71] *O.M-C.* p. 173: 'eine Tinctur . . . welche da ist Christus JEsus selbst, der Anfang und das Ende, das Centrum der offenbaren Göttlichen Ewigkeit.'
[72] Louvigni, *op. cit.* p. 156.
[73] *KKH.* II. 1159.
[74] T. Vaughan, *Magical Writings*, p. 69.
[75] J. V. Andreae, *op. cit.* pp. 150-1.
[76] *O.M-C.* p. 512: 'wann oft gutwillige Seelen hören und vernehmen, dass sie GOTT und seine Weisheit suchen müsten, so bedencken sie nicht, dass sie solches hohe Gut in ihnen selbst in ihrem innigsten Seelengrund suchen und finden müsten.'
[77] Louvigni, *op. cit.* p. 179: 'Ich erkannte die Gottheit als eine schöne Sonne, welche mit unendlich vielen Strahlen in dem verborgenen Winkel meines Herzens ihren Sitz hatte, und . . . begehrte sich von meinen obern Kräften erkennen und lieben zu lassen . . . so verbirg dich doch in deinem Mittelpunkte, in Gott, der im Grunde deiner Seele ist.'
[78] *WA.* I. 25(I). 281.
[79] *RR.* pp. 114-16.
[80] Underhill, *op. cit.* p. 64.
[81] *RR.* p. 168.
[82] Croll, *Philosophy Reformed*, p. 212.
[83] *A.C.H.* p. 280: 'Je näher ein subjectum dem centro lieget, je stärcker wird es figiret.'
[84] *O.M-C.* p. 91: '. . . dass alles, was ausser dem Puncte ist, in steter Unruhe stehe, und sich unaufförlich nach seinem Anfange, das ist, nach dem Punkt seiner Ruhe sehne.'
[85] J. B. van Helmont, *A Ternary of Paradoxes*, Prolegomena, para. 1.
[86] Underhill, *op. cit.* p. 373.
[87] Croll, *op. cit.* p. 215.
[88] *O.M-C.* p. 351.
[89] *A.C.H.* p. 346.
[90] Quoted *KKH.* II. 432: 'denn welcher in das Reich GOttes eingehen will, der muss zuvor mit dem leib in seine mutter

eingehen, und darinnen ersterben . . . die seel . . . muss . . . wieder in ihre mutter in GOtt eingehen. . . .'

[91] *Idem*: 'Also muss auch die gantze machina mundi . . . wiederum in ihre mutter . . . in ihre primam materiam, massam confusam, und abyssum, terram, wiederum reduciret, und dadurch wiederumb regeneriret, und ewig gemachet werden.'

[92] *O.M-C.* p. 578. The lines are translated from the verses of George Ripley:

Doch dünckt mich, es steh die Thür der Verheissung mir auch offen,
Dass man kommen muss aufs neu aus der Mutter Leib geschloffen.
Denn ich kan sonst anderst nicht in das Himmelreich gelangen,
Wo ich nicht zum andern mal werde zur Geburt empfangen,
Darum thut mich wiederum nach der Mutter Schos verlangen,
Um regenerirt zu seyn, das will ich nur bald anfangen.
Hierzu hat die Mutter selbst diesen König angetrieben,
Eilte zu empfangen bald ihn mit mütterlichen Lieben,
Welches grosse Wunderwerck sie auch würcklich thät verüben,
Empfieng in sich, als ein Kind, diesen König unter sieben.

[93] Quoted in *KKH*: II. 434.

[94] *KKH*. II. 435: 'Gleich wie nun Maria übernatürlicher, unsichtbarlicher weiss durch den H. Geist empfangen hat den Sohn GOttes, vom Vater verheissen: Also hat unsere reine Jungfrau der philosophische Mercurius wunderbarlicher weiss, durch den Heil. Geist, das ist, allhie durch den Spiritum Mercurii, . . . die hohe quinta essentia aller dinge wieder neu gebohren.'

[95] Berthelot, *Origines de l'Alchimie*, pp. 172-3.

[96] *RR*. p. 355.

[97] *O.M-C*. p. 510: 'müssen wir . . . nicht nur der Welt mit ihrer Lust, sondern auch uns selber mit alles was wir haben und besitzen gantz absagen.'

[98] *Von dem grossen Stein der Uhralten*, p. 53: 'Zwene widerwertige Geister wohnen wol bey einander, vertragen sich aber nicht leichlich zusammen.'

[99] *Von dem grossen Stein der Uhralten*, p. 80.

[100] *Ibid*. 'sie treibt das bose aus . . . das das bose zugleich mit dem guten werden muss.'

[101] *RR*. p. 278.

[102] *The Last Will and Testament of Basil Valentine*, p. 170.

[103] Basil Valentine, *Von dem grossen Stein der Uhralten*: 'eine runde Kugel, darauff die Göttin Fortuna ihren Reisewagen umblauffen lesset.'

[104] Quoted in *O.M-C.* p. 578: 'Ich bin also von der Natur zur Rundigkeit geneigt.'

[105] Trans. B. Jowett.

[106] *O.M-C.* p. 377: 'Dass wir uns aber bemühen solten, alle wieder einander zu lauffen scheinende Stellen dieser unserer Schrifften, zu eines jeden Vergnügen, ausführlich allhier zu vereinigen, ist unsers thuns gar nicht.'

CHAPTER II

[1] Biedermann, *Goethes Gespräche*, 2, 224.

[2] H. H. Brinton, *The Mystic Will*, p. 81.

[3] Boehme, *Mysterium Magnum*, ch. III, para. 5: 'Denn das Nichts hungert nach dem Etwas, und der Hunger ist die Begierde . . . Sie fasset sich nur selber und impresset sich . . . und führet sich vom Ungrunde in Grund, . . . dass das Nichts voll wird. . . .'

[4] H. L. Martensen, *Jacob Boehme*, p. 39.

[5] J. Campbell Brown, *A History of Chemistry*, p. 111.

[6] *Prodromus Rhodo-Stavroticus* (Anon.), p. 22.

Der König ist gantz unverwesslich
Darumb wird Seel, Leib, Geist einig.

[7] *Verae alchemiae . . . doctrina*, ed. G. Gratarolus, Book 2, p. 104.

[8] Cp. J. Campbell Brown, *op. cit.* p. 133.

[9] F. Hartmann, *Life and Doctrines of Jacob Boehme*, p. 60.

[10] Boehme, *De Signatura Rerum*, ch. II, para. 10: 'Denn also findet er sich itzt aus dem Nichts in Etwas, und das Etwas ist doch sein Widerwille, denn es ist eine Unruhe, und der freie Wille ist eine Stille.'

[11] Boehme, *De Signatura Rerum*, ch. X, para. 58: 'Der eigene Wille muss wieder in die erste Mutter, die ihn geboren hat . . . eingehen . . . Nun wer will ihn aber des bereden, dass ers thut, denn er ist ein Eignes worden, und soll wieder in seine Mutter eingehen und ein Nichts werden?'

[12] Boehme. *De Signatura Rerum*, ch. II, para. 9: 'so stehet er gleich einem Triangel oder Kreuzrade, das (weil er nicht von der Stätte weichen kann,) drehend wird, . . . [und] . . . das Drehen machet eine Immerwirrung und Brechung, davon die Angst als das Wehe, die dritte Gestalt, entstehet.'

[13] See the table at the end of *The Zohar*, vol. I, in the translation by Sperling and Simon.

[14] *O.M-C.* p. 79.

[15] *Aurora, Jakob Boehmes Sämtliche Werke*, hrsg. K. W. Schiebler, vol. 2, p. 71.

[16] Boehme, *Vom dreifachen Leben*, ch. II, para. 27: 'Auch so gehet der Blitz gerade durch den Stachel der Wütherei des drehenden Rades, . . . also wird aus dem Rade ein + und kann sich nicht mehr drehen, sondern stehet zitternd in der scharfen Macht des Willens der ewigen Freiheit, welcher ist Gott der Vater.'

[17] Boehme, *De Signatura Rerum*, ch. II, para. 15: 'denn der Glanz der Freiheit . . . leuchtet wieder in der finstern Angst und erfüllet die Angst mit der Freiheit, davon der Grimm erlischt, und das drehende Rad stille steht. . . .'

[18] Boehme, *Vom dreifachen Leben*, ch. VI, para. 68: 'Die Bildniss ist in Gott eine ewige Jungfrau in der Weisheit Gottes gewesen, nicht eine Frau, auch kein Mann, aber sie ist beides gewesen.'

[19] Boehme, *Aurora*, ch. VIII, *Sämtl. Werke*, vol. II, p. 81: 'Da küsset der Bräutigam seine Braut.'

[20] Boehme, *Vom dreifachen Leben*, ch. VI, para. 5: 'Denn Gott ist das Wesen aller Wesen, und wir sind als Götter in ihm, durch welche er sich offenbaret.'

[21] Boehme, *De Signatura Rerum*, ch. VII, para. 55-9.

[22] H. H. Brinton, *The Mystic Will*, p. 155.

[23] H. L. Martensen, *Jacob Boehme*, p. 55.

[24] Boehme, *Aurora*, ch. VIII, *Sämtl. Werke*, vol. II, p. 105: '. . . gleich wie der Saame der andern sechs Geister, den sie allda zusammen korporirt haben, und einen Geist daraus gemacht, der hat aller Geister Qualität, und das ist der siebente Geist Gottes in der göttlichen Kraft.'

[25] Boehme, *De Signatura Rerum*, ch. XI, para. 51: 'dass im Paradeis ein vollkommen Leben ohne Wanken, auch ohne einige falsche, böse Begierde sei, und ein immerwährender Tag, da der Paradeismensch hell als ein durchsichtig Glas sei, indem die göttliche Sonne durch und durch scheinet, gleichwie das Gold durch und durch rein ist, ohne Makel.'

[26] Boehme, *De Signatura Rerum*, ch. VIII, para. 18.

[27] The following account is based on the article 'Pietism' in *Hastings' Encyclopaedia of Religion and Ethics*, Edinburgh, 1918.

[28] See H. Trevelyan, *Goethe and the Greeks*, p. 24.

[29] Gerhard Plathow, 'Das Wahrheitsproblem in Goethes Wissenschaft', Zweiter Teil, I Kap.

[30] *WA.* I. 27. 218: 'Ich mochte mir wohl eine Gottheit vorstellen, die sich von Ewigkeit her selbst produzirt; da sich aber Produktion nicht ohne Mannigfaltigkeit denken lässt, so musste sie sich not-

wendig sogleich als ein Zweites erscheinen, welches wir unter dem Namen des Sohnes anerkennen.'

[31] *Ibid.* 'Diese beiden mussten nun den Akt des Hervorbringens fortsetzen und erschienen sich selbst wieder im Dritten, welches nun ebenso bestehend lebendig und ewig als das Ganze war. Hiermit war jedoch der Kreis der Gottheit geschlossen, und es wäre ihnen selbst nicht möglich gewesen, abermals ein ihnen völlig gleiches hervorzubringen.'

[32] *Ibid.* 'Aus dieser Konzentration der ganzen Schöpfung—denn sie war von Luzifer ausgegangen und musste ihm folgen, entsprang nun alles das, was wir unter der Gestalt der Materie gewahr werden, was wir uns als schwer, fest und finster vorstellen. . . .'

[33] Boehme, *Aurora*, *Sämtl. Werke*, vol. II, p. 69: 'daraus und dadurch formiret wird das kreatürliche Wesen . . . sowohl allerlei Farben, Formen und Gewächse.'

[34] Boehme, *Aurora*, ch. XIII.

[35] *Idem*: 'Sie gaben dem unendlichen Sein die Fähigkeit, sich auszudehnen, sich gegen sie zu bewegen: der eigentliche Puls des Lebens war wieder hergestellt.'

[36] *Idem*: 'Man sieht leicht, wie hier die Erlösung nicht allein von Ewigkeit her beschlossen, sondern als ewig notwendig gedacht wird, ja, dass sie durch die ganze Zeit des Werdens und Seins sich immer wieder erneuern muss.'

[37] *Idem*: 'Nichts ist in diesem Sinne natürlicher, als dass die Gottheit selbst die Gestalt des Menschen annimmt. . . . Die Geschichte aller Religionen und Philosophien lehrt uns, dass diese grosse, den Menschen unentbehrliche Wahrheit von verschiedenen Nationen in verschiedenen Zeiten auf mancherlei Weise, ja in seltsamen Fabeln und Bildern der Beschränktheit gemäss überliefert worden ist. . . .'

CHAPTER III

[1] *WA.* I. 27. 321: (*Dichtung und Wahrheit*) 'am meisten aber verbarg ich vor Herdern meine mystisch-kabbalistische Chemie und was sich darauf bezog.'

[2] *Ibid.*

[3] See Max Morris, 'Swedenborg im *Faust*', *Euphorion*, 6 Bd.

[4] Quoted in the introduction to *The Divine Love and Wisdom*. Everyman's edition, p. ix.

[5] *Ibid.*

[6] *Ibid.* p. xiii.

[7] *Ibid.*

[8] *Der junge Goethe*. 4 Bd. S.86: 'Wir sprachen noch von der Chimie. Goethe hat merkwürdige Versuche, ganz eigne, ganz neuere Chimie wie . . . . . wo alles so honett und anständig gemacht wird.'

[9] *Der junge Goethe*, 3 Bd. S.97.

[10] See letter to Frau von Stein, 12 May 1786.

[11] Letter 20 Sept. 1780.

[12] Letter of 14 Nov. 1781. 'Zugleich behandle ich die Knochen als einen Text, woran sich alles Leben und alles menschliche anhangen lässt. . . . Dabey habe ich mir vorgenommen, das Wort Phisiognomik und Phisiognomie gar nicht zu brauchen, vielmehr die Überzeugung davon durch die ganze Reihe des Vortrags einem ieden einleuchten zu lassen. Vielleicht kann ich dir etwas von dem was ich bey näherer Betrachtung der thierischen Ökonomie bemerke zu deinen Arbeiten in der Folge einen nüzlichen Beytrag geben.'

[13] Lavater to Goethe, Nov. 1773. Schriften der Goethe-Gesellschaft. 16 Bd. S.67: 'Eine unendlich wichtige Vermuthung . . . von der allgemeinen Homogeneität aller u. jeder Bildungen der Natur.'

[14] Letter to Herder, 27 March 1784: '. . . es ist der Schlussstein zum Menschen, fehlt nicht, ist auch da. Aber wie! Ich habe mirs auch in Verbindung mit deinem Ganzen gedacht. . . .'

[15] Letter to Knebel, 17 Nov. 1784: 'Die Übereinstimmung des Ganzen macht ein iedes Geschöpf zu dem was es ist. . . . Und so ist wieder iede Creatur nur ein Ton, eine Schattirung einer grossen Harmonie.'

[16] Letter of 27 March 1784.

[17] 20 Dec. 1784 to Herzog Ernst II von Gotha: 'Ich werde nur erst abwarten wie es die Herren vom Handwercke aufnehmen, dass ein Laye in einem so bekannten Lande eine neue Entdeckung gemacht haben will. Ich habe deswegen von allen weiteren Aussichten zu denen man auf diesem Weege gelangen könnte stille geschwiegen um nicht zu früh durch hypothetische Behauptungen verdächtig zu werden.'

[18] See *Ephemerides*, and 'Réflexions . . . sur une végétation chimique du fer' and similar articles by M. Lemery le fils in *Histoire de l'Académie Royale des Sciences*, Amsterdam, 1706, 1707, 1708.

[19] See E. J. Holmyard, *Makers of Chemistry*, p. 128.

[20] Letter of 8 April 1785.

[21] WA. II. 7. 12. 'Bei der fortschreitenden Veränderung der Pflanzentheile wirkt eine Kraft, die ich nur uneigentlich Ausdehnung und Zusammenziehung nennen darf. Besser wäre es ihr ein x oder y nach algebraischer Weise zu geben, denn die Worte

Ausdehnung und Zusammenziehung drücken diese Wirkung nicht in ihrem ganzen Umfange aus.'

[22] *WA.* II. 7. 18.

[23] *WA.* III. 1. 162-6, 187-9.

[24] Letters of 15 June, 6 July, and 9 July 1786.

[25] Letter to Frau von Stein, 10 July 1786: 'Am meisten freut mich ietzo das Pflanzenwesen. . . . Es zwingt sich mir alles auf, ich sinne nicht mehr darüber, es kommt mir alles entgegen und das ungeheure Reich simplificirt sich mir in der Seele, dass ich bald die schwerste Aufgabe weglesen kann. Wenn ich nur jemanden den Blick und die Freude mittheilen könnte, es ist aber nicht möglich. Und es ist kein Traum, keine Fantasie; es ist ein Gewahrwerden der wesentlichen Form, mit der die Natur gleichsam nur immer spielt, und spielend das mannigfaltige hervorbringt. Hätt ich zeit in dem kurzen Lebensraum, so getraut ich mich es auf alle Reiche der Natur—auf ihr ganzes Reich—auszudehnen.'

[26] Diary, 25 Aug. 1781.

[27] Diary, 10 July 1777.

[28] Letter of 14 Nov. 1781: 'Ich bin geneigter als iemand noch eine Welt ausser der Sichtbaren zu glauben und ich habe Dichtungs- und Lebenskraft genug, sogar mein eigenes beschränktes Selbst zu einem Schwedenborgischen Geisteruniversum erweitert zu fühlen.'

[29] See letter to Frau von Stein, 28 June 1786.

[30] 'Der Phasanen Traum fängt an in Erfüllung zu gehen. Denn warrlich was ich auflade kann ich wohl mit dem köstlichen Geflügel vergleichen, und die Entwicklung ahnd ich auch.'

[31] *WA.* I. 30. 168. (*Italienische Reise.*)

[32] *The Hermetic and Alchemical Writings of Paracelsus*, ed. A. E. Waite, vol. 1, p. 86.

[33] *Ibid.* vol. 1, p. 83.

[34] Silberer, *Probleme der Mystik*, p. 230.

[35] *WA.* II. 3. 207: 'Es ist der Missbrauch des Echten und Wahren, ein Sprung von der Idee, vom Möglichen, zur Wirklichkeit, eine falsche Anwendung echter Gefühle, ein lügenhaftes Zusagen, wodurch unsern liebsten Hoffnungen und Wünschen geschmeichelt wird.'

CHAPTER IV

[1] *WA.* I. 31. 147: (*Italienische Reise*) 'Im Angesicht so vieierlei neuen und erneuten Gebildes fiel mir die alte Grille ein, ob ich nicht unter dieser Schar die Urpflanze entdecken könnte? Eine solche muss es doch geben!'

[2] *WA.* I. 31. 147: 'Woran würde ich sonst erkennen, dass dieses oder jenes Gebilde eine Pflanze sei, wenn sie nicht alle nach einem Muster gebildet wären?'

[3] *WA.* I. 31. 240; also letter to Frau von Stein, 8 June 1787.

[4] *WA.* II. 13. 41: 'In Sicilien . . . erhob ich mich von dem beschränkten Begriff einer Urpflanze zum Begriff, und, wenn man will, zur Idee einer gesetzlichen, gleichmässigen, wenn schon nicht gleich gestalteten Bildung und Umbildung des Pflanzenlebens von der Wurzel bis zum Samen.'

[5] *WA.* II. 13. 42: 'Erhebung zu der Ahnung, die Pflanzenwelt müsse ein inneres Gesetz haben, worauf sich die Erscheinungen zurückführen liessen. Noch immer concret genug aufgefasst unter der Form der Urpflanze.'

[6] *WA.* I. 32. 66: (*Italienische Reise*): 'Ich glaube dem Wie der Organisation sehr nahe zu rücken. Du sollst diese Manifestationen—nicht Fulgurationen unseres Gottes mit Freude beschauen.'

[7] Herder, *Gott, Sämmtliche Werke*, hrsg. von Bernhard Suphan, 16 Bd. S.456, 434.

[8] *WA.* I. 32. 77: 'Mich hat es [Herder's *Gott*] aufgemuntert, in natürlichen Dingen weiter vorzudringen, wo ich denn besonders in der Botanik auf ein ἓν καὶ πᾶν gekommen bin, das mich in Erstaunen setzt. . . .'

[9] *WA.* I. 32. 44: 'Vorwärts und rückwärts ist die Pflanze immer nur Blatt, mit dem künftigen Keime so unzertrennlich vereint, dass man eins ohne das andere nicht denken darf.'

[10] *Ibid.* 'der wahre Proteus . . . der sich in allen Gestaltungen verstecken und offenbaren könne.'

[11] Illustrated in Hansen, *Goethes Metamorphose der Pflanzen*, Plate E, and in Troll, *Goethes Morphologische Schriften*, Plate X.

[12] Hansen, *op. cit.* Plate D, and Troll, *op. cit.* Plate IX.

[13] C. Singer, *A Short History of Biology*, p. 215.

[14] *Ephemerides*, *WA.* I. 37. 105.

[15] See *V.G.G.* 1941.

[16] *Metamorphose der Pflanzen*, para. 6.

[17] *WA.* II. 13. 176: 'Metamorphose im höheren Sinne durch nehmen und geben hat schon Dante trefflich geschildert.'

[18] The translations from the *Metamorphosis* essay are taken, with one or two slight exceptions, from the version of A. Arber in 'Goethe's Botany'. *Met. d. Pfl.* para. 24: (die Blatter) 'sind . . . ihre grössere Ausdehnung und Verfeinerung dem Lichte und der Luft schuldig.'

[19] *Ibid.* para. 27, 'dass ein oberer Knoten, indem er aus dem

vorhergehenden entsteht und die Säfte mittelbar durch ihn empfängt, solche feiner und filtrierter erhalten . . . müsse.'

[20] *Met. d. Pfl.* para. 28: 'Indem nun auf diese Weise die roheren Flüssigkeiten immer abgeleitet, reinere herbeigeführt werden und die Pflanze sich stufenweise feiner ausarbeitet, erreicht sie den von der Natur vorgeschriebenen Punkt. Wir sehen endlich die Blätter in ihrer grössten Ausbreitung und Ausbildung und werden bald darauf eine neue Erscheinung gewahr, welche uns unterrichtet: die bisher beobachtete Epoche sei vorbei, es nahe sich eine zweite, die Epoche der Blüte.'

[21] *Ibid.* para. 12.

[22] *Ibid.* para. 12.

[23] *Ibid.* para. 28.

[24] *Ibid.* para. 28: 'grösste Ausbildung.'

[25] *KKH.* II. 433: 'vielweniger kan sein güldener sohn in ein beflecktes unreines cörper eingehen.'

[26] *WA.* II. 6. 190: 'Schelver verfolgt den ruhigen Gang der Metamorphose, welche dergestalt sich veredlend fortschreitet, dass alles Stoffartige, Geringere, Gemeinere nach und nach zurückbleibt und in grösserer Freiheit das Höhere, Geistige, Bessere zur Erscheinung kommen lässt.'

For the use of the word 'geistig', see p. 93 above.

[27] *Ibid.* 'Warum soll denn nicht also diese letztere Verstäubung auch nur eine Befreiung sein vom lästigen Stoff, damit die Fülle des eigentlichst Innern endlich, aus lebendiger Grundkraft, zu einer unendlichen Fortpflanzung sich hervorthue.'

[28] *Met. d. Pfl.* paras. 24, 25.

[29] *Ibid.* para. 30: 'Man hat bemerkt, dass häufige Nahrung den Blütenstand einer Pflanze verhindere, mässige, ja kärgliche Nahrung ihn beschleunige.'

[30] *A.C.H.* p. 280: 'Je näher ein subjectum dem centro lieget, je stärcker wird es figiret, wenn es nur von der copiösen stets aufsteigenden Feuchtigkeit nicht verhindert wird.'

[31] *Met. d. Pfl.* para. 73: 'In diesen sechs Schritten vollendet die Natur unaufhaltsam das ewige Werk der Fortpflanzung der Vegetabilien durch zwei Geschlechter.'

[32] Günther Schmid, *V.G.G.* 1942.

[33] J. Richter, 'Jakob Boehme und Goethe', *Jahrb. des freien deutschen Hochstifts*, 1934-5.

[34] *Met. d. Pfl.* paras. 36, 99: 'um eine Achse versammelt.'

[35] *Ibid.* para. 37: 'um die Achse des Stiels gereihet.'

[36] *Ibid.* para. 33: 'um *einen* Punkt versammelt.'

[37] *Die Metamorphose der Pflanzen*, *WA*. I. 1. 291: 'Rings im Kreise . . . um die Achse gedrängt.'

[38] *WA*. II. 13. 90: 'Iberis umbellata die erst sich aussen an den Speichen entwickelnden Blumen sind weis wenig violett. sobald sich das ganze Rad entwickelt hat wird sie blau.'

[39] *Met. d. Pfl.* para. 32: 'um einen gemeinschaftlichen Mittelpunkt.'

[40] *Ibid.* para. 38: '. . . um einen Mittelpunkt verbindet.'

[41] *Ibid.* para. 33: 'einen Strahlenkranz.' See also paras. 78, 103, 104, 106.

[42] *Ibid.* para. 116: 'Versammlung verschiedener Organe um ein Zentrum.' Cp. also para. 118.

[43] *WA*. II. 7. 370: 'Durch eine Folge von Ausdehnung und Zusammenziehung wird die Pflanze zur ☥ gebracht. Erst geht eine sachte Stufenfolge an, bis zuletzt sie sich gleichsam auf einmal resolvirt, durch entgegengesetzte Wirkungen ihr Ende zu erreichen.'

[44] *WA*. II. 6. 450: 'Folge der foliorum der Cartina? [sic] scandans biss sie sich in den Kelch verlieren.'

[45] *WA*. II. 6. 156: 'Er sah dass es sich an Volum verringere, und bemerkte nicht, dass es sich zugleich veredle, und schrieb daher den Weg zur Vollendung, widersinnig, einer Verkümmerung zu.'

[46] *Isis* von Oken. Bd. XXI. S.522. Leipzig 1828.

[47] *WA*. II. 13. 100, and *WA*. II. 7. 343.

[48] *Loc. cit.* 'Diese Blätter lagern sich gegen das Ende eines Zweiges oder Blüthenstieles um eine gemeinschaftliche Axe her, bis sie in Vereinigung und gegenseitiger Bindung Stillstand gefunden haben. Diese organische Bewegung . . . ist . . . nicht ohne Beziehung auf allgemein cosmische Gesetze.' (These are Martius's words. Goethe's copying, as given in the Weimar edition, is inaccurate.)

[49] *Met. d. Pfl.* para. 63

[50] *WA*. II. 7. 278: 'Inwiefern es eine wahre Monandria monogynia giebt.'

[51] *Ibid.* He intends to examine the *Hippuris*, a waterweed which fits this classification.

[52] *WA*. II. 7. 274: 'Vom Zeugen und Gebähren zum Zeugen und Gebähren vollendet die Natur den Kreislauf des Lebens einer Pflanze.'

[53] *Met. d. Pfl.* para. 82: 'dass der Same in dem höchsten Grade von Zusammenziehung und Ausbildung seines Innern sich befindet.'

[54] *WA*. II. 13. 20.

[55] A. Arber, 'Goethe's Botany', p. 76.

[56] *Met. d. Pfl.*, para. 16: 'gedoppelt'.

[57] *Ibid.* 'Es sind nämlich die Blätter des ersten Knotens oft auch dann *gepaart*, wenn die folgenden Blätter wechselweise stehen; es zeigt sich also hier eine Annäherung und Verbindung der Teile, welche die Natur in der Folge trennt und voneinander entfernt.'

[58] *Ibid.* para. 66: 'die wunderbarsten Beispiele der . . . Verbindung der in ihren ersten Anfängen wahrhaft getrennten Pflanzenteile. . . .'

[59] *Ibid.* para. 38.

[60] *Farbenlehre*, para. 739: 'Das Geeinte zu entzweien, das Entzweite zu einigen, ist das Leben der Natur; dies ist die ewige Systole und Diastole, die ewige Synkresis und Diakresis, das Ein- und Aus-Athmen der Welt, in der wir leben, weben und sind.'

[61] *WA.* II. 11. 166: 'Was in die Erscheinung tritt, muss sich trennen, um nur zu erscheinen. Das Getrennte sucht sich wieder und es kann sich wieder finden und vereinigen: im niederen Sinne, indem es sich nur mit seinem Entgegengestellten vermischt, wobei die Erscheinung Null oder wenigstens gleichgültig wird. Die Vereinigung kann aber im höheren Sinne geschehen, indem das Getrennte sich zuerst steigert und durch die Verbindung der gesteigerten Seiten ein Drittes, Neues, Unerwartetes hervorbringt.'

[62] *WA.* I. 6. 28.

[63] *Ibid.*

[64] *WA.* II. 13. 123. The passage is found, once again, in Goethe's unpublished notes: 'Durch dieses fortschreitende Verändern der Theile werden zuletzt die beyden Geschlechter hervorgebracht, welche sodann sichtbar und greiflich auf eine schnelle und gewaltige weise dasjenige thun was die Pflanze auf dem anderen Wege nur langsam und NB *unvollkommen* hätte bewirken können.'

[65] *WA.* II. 13. 148. 'Betrachtung der Amaryllis. "Die an den Knoten [?] der Spadix und des Farbigen Kelches grün ist. also behaupten die Theile ihre Frühere niedre Vegetabilität."'

[66] *Met. d. Pfl.* para. 93: 'Dieses wohl erwogen, werden wir folgern dürfen: dass die Samen, welche sich durch ihren eingeschlossenen Zustand von den Augen, durch die sichtbare Ursache ihrer Bildung und Absonderung von den Gemmen unterscheiden, dennoch mit beiden nahe verwandt sind.'

[67] *Met. d. Pfl.* para. 94: '. . . es wird sich . . . finden, dass in diesem Falle sich keine Augen entwickeln, vielmehr die *Möglichkeit* einer solchen Entwicklung ganz und gar aufgehoben wird.'

[68] *Ibid.* para. 113.

[69] *Ibid.* para. 114: 'Eine Pflanze, welche *sprosst*, dehnt sich mehr oder weniger aus, . . . ihre Blätter breiten sich von dem Stengel

nach allen Seiten aus. Eine Pflanze dagegen, welche *blüht*, hat sich in allen ihren Theilen zusammengezogen, Länge und Breite sind gleichsam aufgehoben, und alle ihre Organe sind in einem höchst konzentrierten Zustande, zunächst aneinander entwickelt.'

[70] *Met. d. Pfl.* para. 120: 'Denn wir können ebensogut sagen, ein Staubwerkzeug sei ein zusammengezogenes Blumenblatt, als wir von dem Blumenblatte sagen können, es sei ein Staubgefäss im Zustande der Ausdehnung.'

[71] *Ibid.*

[72] *WA.* I. 6. 197.

[73] *Weissagungen des Bakis*, last verse.

[74] *WA.* II. 11. 59: 'zugleich aber gewissermassen mich selbst, mein Inneres, meine Art zu sein, zu offenbaren.'

[75] Quoted by B. Förster, *G.J.B.* 27 Bd. S.232: 'Mein ganzes inneres Wirken erwies sich als eine Heuristik, welche, eine unbekannte, geahnte Regel anerkennend, solche in der Aussenwelt zu finden, und in die Aussenwelt einzuführen trachtet.'

[76] Quoted in Erwin Jäckle, 'Goethes Morphologie und Schellings Weltseele', 'Was habe ich denn an einer Idee, die mich nötigt, meinen Vorrat an Phänomenen zu verkümmern?'

[77] Boehme, *Aurora*, *Sämtl. Werke*, vol. 2, p. 74.

[78] See Troll, *Goethes morphologische Schriften*, Plate V.

[79] J. von Sachs, *History of Botany*, 1890.

[80] Erik Nordenskiöld, *The History of Biology*, 1929, p. 282.

[81] H. S. Reed, *Short History of the Plant Sciences*, 1942, p. 135.

[82] C. Singer, *A Short History of Biology*, 1931, pp. 215-26.

[83] *Ibid.* p. 222.

[84] A. Arber, 'Goethe's Botany', 1946, p. 86.

CHAPTER V

[1] *Beyträge zur Optik, erstes Stück*, 1791. *WA.* II. 5. 3.

[2] In *Histoire de l'Académie Royale des Sciences et Belles Lettres*, Berlin, 1767. See the *Ephemerides*.

[3] *Farbenlehre*, paras. 62-80.

[4] *Schriften der Goethe-Gesellschaft*, 16. Bd S.289. 'Sie hat unvergleichliche Einsichten in die Chimie, in die Natur der Farben, usw.'

[5] *WA.* I. 37. 94.

[6] *O.M-C.* p. 68: 'Die Natur kennet nichts mehr als Licht und Schatten, das ist, Hitze und Kälte, die da nichts anders ist als Truckenheit und Feuchte.'

[7] *WA.* II. 1. xi: '. . . die Mitteilung höherer Anschauungen unter den Freunden der Natur zu erleichtern, war die Hauptabsicht des gegenwärtigen Werkes. . . .'

[8] *Farbenlehre*, para. 919: '. . . dann wird gewiss eine besondere geheimnisvolle Anschauung eintreten, dass man diesen beiden getrennten, einander entgegengesetzten Wesen eine geistige Bedeutung unterlegen könne. . . .'

[9] *Ibid.* para. 918: '. . . der Triangel steht bei dem Mystiker in grosser Verehrung, gar manches lässt sich im Triangel schematisieren und die Farbenerscheinungen gleichfalls, und zwar dergestalt, dass man durch Verdoppelung und Verschränkung zu dem alten geheimnisvollen Sechseck gelangt.'

[10] *WA.* II. 1. xxxi.

[11] *Ibid.*

[12] *Farbenlehre*, para. 920: 'Doch wir tun besser, uns nicht noch zum Schlusse dem Verdacht der Schwärmerei auszusetzen, um so mehr, als es, wenn unsre Farbenlehre Gunst gewinnt, an allegorischen, symbolischen und mystischen Anwendungen dem Geiste der Zeit gemäss gewiss nicht fehlen wird.'

[13] *Ibid.* para. 242: 'Hier werden nicht willkürliche Zeichen, Buchstaben . . . hingestellt; . . . sondern es ist von Erscheinungen die Rede, die man vor den Augen des Leibes und des Geistes gegenwärtig haben muss, um ihre Abkunft, ihre Herleitung sich und andern mit Klarheit entwickeln zu können.'

[14] *WA.* II. 1. xii.

[15] *WA.* II. 1. x: 'Mit leisem Gewicht und Gegengewicht wägt sich die Natur hin und her, und so entsteht ein Hüben und Drüben, ein Oben und Unten, ein Zuvor und Hernach, wodurch alle Erscheinungen bedingt werden, die uns im Raum und in der Zeit entgegentreten.'

[16] *WA.* II. 1. xi: 'Man hat ein Mehr und Weniger, ein Wirken ein Widerstreben, ein Thun ein Leiden, ein Vordringendes ein Zurückhaltendes, ein Heftiges ein Mässigendes, ein Männliches ein Weibliches überall bemerkt und genannt.'

[17] *WA.* II. 1. x: 'Diese allgemeinen Bewegungen werden wir auf die verschiedenste Weise gewahr, bald als ein einfaches Abstossen und Anziehen, bald . . . als Säurung oder Entsäurung. . . .'

[18] *WA.* II. 1. xxx: 'die ganze Natur offenbare sich durch die Farbe dem Sinne des Auges.'

[19] *WA.* II. 1. ix: 'Thaten und Leiden des Lichts.'

[20] *Farbenlehre*, paras. 1-45.

[21] *Ibid.* para. 33.

[22] *WA.* II. 11. 221: 'Finsterniss als der Ab- und Urgrund des Seins.'
[23] *Farbenlehre*, paras. 197 sqq. See also *Beyträge zur Optik.*
[24] *Ibid.* paras. 145 sqq.
[25] *Ibid.* para. 146: 'Die reine durchscheinende Trübe leitet sich aus dem Durchsichtigen her.'
[26] *Ibid.* para. 147: 'Die vollendete Trübe ist das Weisse, die gleichgültigste, hellste, erste undurchsichtige Raumerfüllung.'
[27] *Ibid.* para. 148: 'Das Durchsichtige selbst, empirisch betrachtet, ist schon der erste Grad des Trüben.'
[28] *Ibid.* paras. 178, 179.
[29] *Ibid.* para. 371: 'begrenztes Licht'.
[30] *Ibid.* para. 374.
[31] See *Zur Farbenlehre. Polemischer Theil*, *WA.* II. 2.
[32] *Farbenlehre*, paras. 309 sqq.
[33] Giordano Bruno, *Von der Ursache*, trans. Lasson. Berlin, 1872, p. 65.
[34] *Farbenlehre*, paras. 765, 778.
[35] *Ibid.* paras. 47-88.
[36] *Ibid.* paras. 765-71.
[37] *Ibid.* para. 779: 'ein reizendes Nichts.'
[38] *Ibid.* paras. 778-85.
[39] *Ibid.* para. 781: 'weil es uns nach sich zieht.'
[40] *Ibid.* para. 695:

Plus	*Minus*
Gelb	Blau
Wirkung	Beraubung
Licht	Schatten
Hell	Dunkel
Kraft	Schwäche
Wärme	Kälte
Nähe	Ferne
Abstossen	Anziehen
Verwandtschaft mit Säuren	Verwandtschaft mit Alkalien

[41] *Ibid.* paras. 47-51.
[42] *Farbenlehre*, para. 60: 'schliesst in sich selbst den Farbenkreis ab.'
[43] *Ibid.* paras. 150, 170.
[44] *Ibid.* para. 151.
[45] *Ibid.* para. 215.
[46] *WA.* II. 1. xxv: 'Intensiren.'

[47] *Farbenlehre*, para. 522: 'Für diese unmerkliche Steigerung des Gelben und Blauen ins Rote haben die Franzosen einen artigen Ausdruck, indem sie sagen, eine Farbe habe einen "oeil de rouge".'

[48] *Ibid.* para. 523.

[49] *Ibid.* para. 539: '. . . dass . . . die wahre Vermittlung vom Gelben und Blauen nur durch das Rote geschieht.'

[50] *RR.* p. 212.

[51] *Last Will*, p. 149.

[52] A. E. Waite (ed.) *The Hermetic and Alchemical Writings of Paracelsus*, vol. I, p. 61.

[53] *Farbenlehre*, para. 215: '. . . ein prächtig reines Rot . . . das wir oft mit dem Namen Purpur bezeichnet haben.'

[54] *Ibid.* para. 792: 'ein ganz reines Rot. . . . Wir haben diese Farbe ihrer hohen Würde wegen manchmal Purpur genannt, ob wir gleichwohl wissen, dass der Purpur der Alten sich mehr nach der blauen Seite hinzog.'

[55] *Ibid.* paras. 150, 517.

[56] *Ibid.* para. 111.

[57] *Ibid.* para. 795.

[58] *Farbenlehre*, para. 794: '. . . so lässt sich denken, dass nun in der Vereinigung der gesteigerten Pole eine eigentliche Beruhigung, die wir eine ideale Befriedigung nennen möchten, stattfinden könne.'

[59] *Ibid.* para. 798: 'Das Purpurglas zeigt eine wohlerleuchtete Landschaft in furchtbarem Lichte. So müsste der Farbeton über Erd und Himmel am Tage des Gerichts ausgebreitet sein.'

[60] 'Gott, Gemüt und Welt', *WA.* I. 2. 219.

[61] *Farbenlehre*, para. 793: 'dass diese Farbe teils actu teils potentia alle andern Farben enthalte.'

[62] *Ibid.* para. 794: 'Das Zusammentreten zweier entgegengesetzten Enden, die sich zu einer Vereinigung nach und nach selbst vorbereitet haben.'

[63] M. Atwood, *A Suggestive Inquiry into the Hermetic Mystery*, Introduction, p. 26.

[64] *Farbenlehre*, para. 517: 'Die Steigerung erscheint uns als eine In-sich-selbst-Drängung . . . der Farben.'

[65] Boehme, *De Signatura Rerum*, ch. II, para. 28: 'Mit dem *in sich Suchen* machet er [der Wille] das Centrum der Natur.'

[66] *KKH.* II. 433-5: 'Dieweil sie [die Menschen, Metallen] aber noch ein kleines fünčklein des ewigen unsichtbaren feuers, der hohen Quinta Essentia von dem Vater ererbet, noch bey sich haben, so erbarmet sich der Vater ihrer. . . . Dieser Vater . . . das ist der cörper der solis liegt in allen verderbten metallen verschlossen. . . .'

[67] *Farbenlehre*, para. 700: 'Dieser Schein wächst immer fort, so dass er auf der höchsten Stufe der Steigerung prävaliert.'

[68] *RR*. 'An Exposition upon Sir George Ripley's Epistle to King Edward IV', p. 43.

[69] *RR*. p. 263.

[70] *Farbenlehre*, paras. 699-700: 'Das Blaue und Gelbe lässt sich nicht verdichten, ohne dass zugleich eine andre Erscheinung mit eintrete. Die Farbe ist in ihrem lichtesten Zustand ein Dunkles, wird sie verdichtet, so muss sie dunkler werden, aber zugleich erhält sie einen Schein, den wir mit dem Worte "rötlich" bezeichnen. Dieser Schein wächst immer fort, so dass er auf der höchsten Stufe der Steigerung prävaliert.'

[71] *Ibid.* para. 240: 'Lehre der Steigerung und Beschattung.'

[72] *Ibid.* para. 33: 'nebeneinander gerückt.'

[73] *Ibid.* para. 36: 'eine innigere Verbindung.'

[74] *Ibid.* para. 36: 'nahe aneinander gedrängt.'

[75] *WA*. II. 5. 96: 'eine Aneinanderdrängung der Theile.'

[76] *Ibid.*

[77] *Farbenlehre*, para. 518.

[78] *WA*. II. 5. 445: 'bei völligem Zusammendrängen.'

[79] *Farbenlehre*, para. 521: 'dass, je reiner und gedrängter das Berliner-blau oder das Kobaltglas bereitet wird, es immer einen rötlichen Schein annimmt und mehr ins Violette spielt.'

[80] *Ibid.* paras. 531-3.

[81] *O.M-C.*, p. 231: 'so bekomstu augenblicklich eine blut rothe überaus saturirte Tinctur wie ein gestocktes Blut.'

[82] *RR*. 'An Exposition upon Sir George Ripley's Vision', p. 23.

[83] *Farbenlehre*, para. 531: 'Die Beweglichkeit der Farbe ist so gross, dass selbst diejenigen Pigmente, welche man glaubt spezifiziert zu haben, sich wieder hin und her wenden lassen.'

[84] *Ibid.* para. 545: 'so fixiert sie sich doch zuletzt unter gewissen Umständen.'

[85] *Ibid.* paras. 471-85 and 508-50.

[86] *WA*. II. 1. xxv.

[87] *Farbenlehre*, para. 697: 'Wenn man diesen spezifischen Gegensatz in sich vermischt, so heben sich die beiderseitigen Eigenschaften nicht auf; sind sie aber auf den Punkt des Gleichgewichts gebracht, dass man keine der beiden besonders erkennt, so erhält die Mischung wieder etwas Spezifisches fürs Auge, sie erscheint als eine Einheit, bei der wir an die Zusammensetzung nicht mehr denken. Diese Einheit nennen wir Grün.'

[88] *Ibid.*

[89] *Ibid.* para. 745: 'eine Vermischung der beiden niedern Ende.'

[90] *Ibid.* para. 802: 'eine reale Befriedigung.'

[91] *Ibid.* para. 919: 'Wenn man erst das Auseinandergehen des Gelben und Blauen wird recht gefasst, besonders aber die Steigerung ins Rote genugsam betrachtet haben, wodurch das Entgegengesetzte sich gegeneinander neigt und sich in einem Dritten vereinigt, dann wird gewiss eine besondere geheimnisvolle Anschauung eintreten, dass man diesen beiden getrennten, entgegengesetzten Wesen eine geistige Bedeutung unterlegen könne, und man wird sich kaum enthalten, wenn man sie unterwärts das Grün und oberwärts das Rote hervorbringen sieht, dort an die irdischen, hier an die himmlischen Ausgeburten der Elohim zu gedenken.'

[92] *Ibid.* para. 918.

[93] *Ibid.* 'durch Verdoppelung und Verschränkung'.

[94] *Last Will and Testament*, p. 170.

[95] *Divine Love and Wisdom*, para. 147.

[96] *Farbenlehre*, para. 586: 'Alles Lebendige strebt zur Farbe, zum Besondern, zur Spezifikation. . . .'

[97] *Ibid.* para. 147.

[98] *Ibid.* para. 494.

[99] *Idem.*

[100] *Met. d. Pfl.* para. 45.

[101] *Farbenlehre*, para. 586: 'Alles Abgelebte zieht sich nach dem Weissen, zur Abstraktion, zur Allgemeinheit, zur Verklärung, zur Durchsichtigkeit.'

[102] *Wahlverwandtschaften.* 2. Teil, 1. Kap. 'Das reine Gefuhl einer endlichen allgemeinen Gleichheit wenigstens nach dem Tode scheint mir bernhigender als dieses eigensinnige starre Fortsetzen unserer Persönlichkeiten, Anhänglichkeiten und Lebensverhältnisse.'

[103] *Farbenlehre*, para. 596: 'Es sei nun, dass das Licht die ihm verwandte Farbe ergreife, . . . und das an ihr Spezifizierte in ein Allgemeines auflöse oder dass eine andre, uns unbekannte Operation geschehe.'

[104] *Farbenlehre*, para. 597: 'Und so mag sich denn freilich das Wasser auch hier als ein Auflösendes, Vermittlendes, das Zufällige Aufhebendes und das Besondere ins Allgemeine Zurückführendes beweisen.'

[105] *WA.* II. 5. 398: 'Wahres, mystisch vorgetragen.'

[106] *Ibid.* '. . . die Farben scheiden sich nach Licht und Finisterniss und nach verschiedenen gradibus derselben.'

[107] *WA.* II. 398: '. . . sondern urständen aus dem natürlichen Fortgange des Lichts.'

[108] *WA.* II. 5. 399: 'Wer diesem allem etwas tiefer nachsinnet, der wird diese Anmerkungen mit der geheimen Philosophie und Experienz derer Chemicorum desto leichter vereinigen können.'

[109] W. Ostwald, *Colour-Science*, pp. 15-16.

[110] *WA.* II. 3 and 4.

[111] See *WA.* II. 11. 167, and the commentary in F. Weinhandl, *Die Metaphysik Goethes*, 3. Buch, which I have adapted in the following account.

[112] *WA.* II. 6. 156: '. . . dass die Geistes-Augen mit den Augen des Leibes in stetem lebendigen Bunde zu wirken haben, weil man sonst in Gefahr geräth zu sehen und doch vorbei zu sehen.'

CHAPTER VI

[1] 28 Sept. 1779. See also Wasiliewski, *Goethes meteorologische Studien.*

[2] Letter to Frau von Stein, 19 Nov. 1784.

[3] Letter of 20 June 1784.

[4] *WA.* IV. 8. 255. and *WA.* I. 32. 62. (*Italienische Reise.*)

[5] *WA.* II. 8. 10: 'Schon aus der allgemeinen Idee eines Typus folgt, dass kein einzelnes Thier als ein solcher Vergleichungskanon aufgestellt werden könne; kein Einzelnes kann Muster des Ganzen sein.'

[6] Cp. *Einleitung in die vergleichende Anatomie*, *WA.* II. 8.

[7] *WA.* II. 8. 135.

[8] *Verschiedenheit der Einschränkung und Ausbreitung des ganzen Knochensystems.*

[9] This account is based on A. Holmes, *Principles of Physical Geology*, 1944, ch. v.

[10] *WA.* II. 9. 257: 'dass ich diese vermaledeite Polterkammer der neuen Weltschöpfung verfluche.'

[11] *WA.* II. 9. 299.

[12] *WA.* II. 9. 259-67.

[13] *WA.* II. 11. 202: '. . . doch ist alles, was auf ein höheres Leben sich bezieht, ein friedliches Werden.'

[14] *WA.* II. 9. 276-7: 'Frühere Vorstellung eines chaotischen Zustandes, der aus streitenden Elementen zur Ruhe übergeht.'

'Das Hervortreten der Welt aus den Wassern war in den heiligen Büchern der Juden ausgesprochen.'

[15] *WA.* I. 25 (I) 28: 'Ganz verwirrt und verdüstert ward es unserem Freunde zumute, welcher noch von alters her den Geist, der über den Wassern schwebte, und die hohe Flut, welche fünfzehn Ellen über die höchsten Gebirge gestanden, im stillen Sinne hegte und dem unter diesen seltsamen Reden die so wohl geordnete, bewachsene, belebte Welt vor seiner Einbildungskraft chaotisch zusammenzustürzen schien.'

[16] *O.M-C.* I. Theil, 1. Kap.

[17] *WA.* II. 9. 173-4: 'Auf einem hohen nackten Gipfel sitzend und eine weite Gegend überschauend, kann ich mir sagen: Hier ruhst du unmittelbar auf einem Grunde, der bis zu den tiefsten Orten der Erde hinreicht, keine neue Schicht, keine aufgehäufte, zusammengeschwemmte Trümmer haben sich zwischen dich und den festen Boden der Urwelt gelegt, du gehst nicht wie in jenen fruchtbaren schönen Thälern über ein anhaltendes Grab, diese Gipfel haben nichts Lebendiges erzeugt und nichts Lebendiges verschlungen, sie sind vor allem Leben und über alles Leben.'

[18] *WA.* II. 9. 218.

[19] *WA.* II. 9. 125.

[20] *WA.* II. 9. 179: 'sie scheinen . . . zugleich mit ihrem Ganzen, das sie ausmachen, entstanden.'

[21] *WA.* II. 9. 125.

[22] *WA.* II. 10. 79: 'Das unterste, zugrunde Liegende, welches wir auf der Erde gefunden, ist das Granitische. Sein auszeichnender Begriff ist, kein Continens und Continentum, sondern ein vollkommenes Ineinandersein, eine vollkommene Dreieinigkeit seiner Theile zu haben. Sie stehen in ihm gleich, und keiner hat ein entschiedenes Übergewicht über den anderen.'

[23] *Verae alchemiae . . . doctrina*, ed. G. Gratarolus, Book 2, p. 104.

[24] *RR.* p. 144.

[25] *Jubiläums-Ausg.* 39. 135: 'Da wir den vollkommensten Zustand der Gesundheit nur dadurch gewahr werden, dass wir die Theile unseres Ganzen nicht, sondern das Ganze empfinden.'

[26] Croll, *Philosophy Reformed*, p. 32.

[27] *WA.* II. 10. 79: 'so geschieht es dadurch, dass einer seiner Theile ein Übergewicht über die anderen bekommt, seine Weise zu sein zur herrschenden macht, und die übrigen zwingt, nach dieser Weise sich zu gestalten.'

[28] *Ibid.*

[29] *WA.* II. 10. 80: 'Seine Vielfältigkeit zu bezeichnen, denke man es unter dem Bilde einer Kugel, welche, sowie man aus ihrem Mittelpunkte tritt, Radien nach allen Enden zulässt.'

[30] *WA.* II. 10. 80.
[31] *WA.* II. 9. 246: 'das makro-mikromegische Verfahren der Natur.'
[32] *WA.* II. 9. 241: 'Solidescenz ist der letzte Akt des Werdens, aus dem Flüssigen durchs Weiche zum Festen hingeführt, das Gewordene abgeschlossen darstellend.'
[33] *WA.* II. 10. 255.
[34] *WA.* II. 9. 240: 'Auf diesem Wege jedoch begegnen wir einem anderen Phänomen, das uns bei seiner Unerforschlichkeit nicht loslässt. *Solidescenz ist mit Erschütterung verbunden.*'
[35] *WA.* II. 9. 250: '. . . wie durch einen kleinen Schreck im Augenblicke der Solidescenz verschoben. . . .'
[36] *Ibid.* 'Hier ist auch die erste Tendenz zum Bandartigen unverkennbar; durch eine Störung jedoch ward sie aufgehoben und in einzelne Stücke vertheilt.'
[37] *WA.* II. 9. 248: 'ein gewisses Zucken.'
[38] *WA.* I. 28. 221: '. . . in diesem Augenblick war der Plan zu "Werthern" gefunden, das Ganze schoss von allen Seiten zusammen und ward eine solide Masse, wie das Wasser im Gefäss, das eben auf dem Punkte des Gefrierens steht, durch die geringste Erschütterung sogleich in ein festes Eis verwandelt wird.'
[39] See *Versuch einer Witterungslehre*, *WA.* II. 12. 74.
[40] *WA.* II. 12. 34-8.
[41] *WA.* II. 12. 35: '. . . [eine] trocknende, Wasser auflösende, in sich aufnehmende Gewalt.'
[42] *WA.* II. 12. 105.
[43] *O.M-C.* p. 68.
[44] *A.C.H.* p. 257: '. . . dann kommt wieder die Sonne, exsicciret, coaguliret, und reverberiret die Erde abermahl, dass sie durstig werde, wieder Feuchtigkeit an sich zu ziehen.'
[45] *WA.* II. 12. 34: 'sie . . . erscheinen als Cirrus und verschwinden zuletzt in dem unendlichen Raume.'
[46] *WA.* I. 27. 206: '. . . so wurden zu diesen Operationen Alkalien erfordert, welche, indem sie an der Luft zerfliessen, sich mit jenen überirdischen Dingen verbinden und zuletzt ein geheimnisvolles treffliches Mittelsalz per se hervorbringen sollten.'
[47] *RR.* p. 183.
[48] *Ibid.* p. 224.
[49] *Ibid.* p. 174.
[50] J. C. Barckhausen (Barchusen), *Elementa Chemiae*, 1718, p. 503. See illustration.
[51] *RR.* 'An Exposition upon Sir George Ripley's Epistle to King Edward IV', p. 41.

[52] Transl. G. Goldschmidt, in Ruska, *Studien zur Geschichte der Chemie*, p. 24: 'Denn ich schreite gleich einem Hauche mitten aus dem Wasserbade heraus, mein Gewand sind Nebelwolken, . . . Wie ein ganz dünnes Rauchwölkchen steige ich hinauf, von der Luft getragen, welche mich vollständig in sich birgt.'

[53] *The Magical Writings of Thomas Vaughan*, p. 129.

[54] C. G. Jung, *Psychologie und Alchemie*, p. 343.

[55] *RR*. p. 178.

[56] C. G. Jung and R. Wilhelm, *The Secret of the Golden Flower*, pp. 59 and 67.

[57] *O.M-C*. p. 356: 'durch die magnetische Krafft der Sonnen, in Gestalt der allersubtilesten Sonnen-Stäubgen wieder in die Höhe.'

[58] *O.M-C*. p. 217: '. . . welches . . . alle Metalle ohne Unterschied auflöset, und in die kleinste Theilgen zertheilt.'

[59] *O.M-C*. p. 354: 'gleichwie ein hochrectificirter Spiritus die Cörper in die allerkleinsten Theilgen zertheilet, . . . also vermag der himmlische Mercurius die Cörper in allen dreyen Reichen ohne allen Zwang und Gewalt in ihr erstes Wesen, oder unzeitige Gestalt auffzulösen.'

[60] *O.M-C*. p. 562: '. . . Auch eines todten Menschen eigene Composition dünstet in seiner Aufflösung völlig in die Lufft aus, und er nimmt dieselbe erste Materie, aus welcher er zusammen gesetzt und ernähret war worden, sammt dem jenigen an sich, aus welchem wir sind, leben und ernährt werden.'

[61] *RR*. 'An Exposition upon Sir George Ripley's Preface', p. 69.

[62] *WA*. II. 12. 26.

[63] Letter of 4 Nov. 1779: '. . . leichte, einzelne Nebel stiegen aus den Felsenrizen aufwärts, als wenn die Morgenluft iunge Geister aufwekte, die Lust fühlten, ihre Brust der Sonne entgegen zu tragen und sie an ihren Bliken zu vergülden.'

[64] *Ibid*. '. . . der Himmel hatte sich während unsrer Mitagrast mit weisen Schäfgen überzogen, von denen ich hier eine besondre Anmerkung machen muss: . . . (es schien) als wenn die Sonne die leisesten Ausdünstungen von den höchsten Schneegebürgen gegen sich aufzöge. . . .'

[65] *WA*. II. 12. 9, 35, 41, 26, 41, 10. *WA*. IV. 4, 125.

[66] *WA*. II. 7. 65: '. . . die Scheide . . . theilt sich . . . in vier Theile, und die Fruchtwerkzeuge, sich vom Kolben zu Tausenden ablösend, verbreiten sich schwimmend auf dem Wasser, anzusehen wie silberweisse Flocken, welche sich nach dem weiblichen Individuum gleichsam bemühen und bestreben.'

[67] *WA*. II. 12. 10.

CHAPTER VII

[1] Gräf, *Goethe über seine Dichtungen*, Epos. I. 350.
[2] *WA.* I. 18. 224: 'ein Märchen, durch das Sie an nichts und an alles erinnert werden sollen.'
[3] Letter of (28 June) 1786: 'Christian Rosenkreuz Hochzeit habe ich hinaus gelesen, es giebt ein schön Mährgen zur guten Stunde, wenn es wiedergebohren wird, in seiner alten Haut ists nicht zu geniessen.'
[4] *WA.* II. 3. 208: 'Es führt zu sehr angenehmen Betrachtungen wenn man den poetischen Theil der Alchymie, wie wir ihn wohl nennen dürfen, mit freiem Geiste behandelt. Wir finden ein aus allgemeinen Begriffen entspringendes, auf einen gehörigen Naturgrund aufgebautes Märchen.'
[5] *WA.* I. 18. 123.
[6] See Weinhandl, *Die Metaphysik Goethes*, 3. Buch, 4. Kap., also I. Dzialas, *Auffassung und Darstellung der Elemente bei Goethe.*
[7] *The Hermetic and Alchemical Writings of Paracelsus*, ed. A. E. Waite, p. 22.
[8] *RR.* p. 336.
[9] *Ibid.* p. 388.
[10] *Met. d. Pfl.* para. 114.
[11] *WA.* II. 8. 60.
[12] *O.M-C.* p. 575: 'Endlich wirst du sehen, dass die Schlange aus sich selbst schwanger werden und das so edle Himmels-Kind, männlich-und weibliches Geschlechtes, gebähren wird, welches die Könige auff Erden suchen anzubäthen.'
[13] *WA.* I. 18. 260: 'Oberwärts schnitt sich der helle Kreis scharf an dem dunklen Himmel ab, aber unterwärts zuckten lebhafte Strahlen nach dem Mittelpunkte zu und zeigten die bewegliche Festigkeit des Gebäudes.'
[14] *De Signatura Rerum*, ch. x, para. 67: 'Denn vor der Vermählung mit der Jungfrau lieget das himmlische Wesen des Jünglings in Tode verschlossen.'
[15] *Op. cit.* p. 80.
[16] *RR.*, 'An Exposition upon a Preface of Sir George Ripley', pp. 55-6.
[17] *Daniel*, 2. xxxi-xxxiii.
[18] Cp. *WA.* I. 21. 37.
[19] See E. Lennhoff, *The Freemasons*, London, 1934, ch. 1.
[20] *Met. d. Pfl.* para. 7: '. . . so erschlafft sie hier gleichsam und lässt unentschlossen ihr Geschöpf in einem unentschiedenen,

weichen, unsern Augen oft gefälligen, aber innerlich unkräftigen und unwirksamen Zustande.'

[21] *The Zohar*, vol. I, p. 262.

[22] E. Lévi, *History of Magic*, p. 440.

[23] *WA*. I. 28. 137. (*Dichtung und Wahrheit*.)

[24] *WA*. I. 32. 90.

CHAPTER VIII

[1] Barker Fairley, *A Study of Goethe*, p. 164.

[2] *Ibid*. p. 264.

[3] F. Gundolf, *Goethe*, p. 15, and *passim*.

[4] H. Leisegang, *Goethes Denken*, *passim*.

[5] P. Zimmermann, *Goethes Briefe an E. Th. Langer*, p. 26: 'Wie ist's denn Ihnen ietzo lieber Freund? nach ihrem letzten Briefe sind sie nicht vergnügt. Sie sind zu entfernt von dem Mittelpunkt ihrer Welt um ruhig zu seyn, und bissher war Ihr Schicksaal zu wandern wie eine Felge, immer herum, und am Ende der Axe so nah wie am Anfang. Und ein zärtliches Herz dazu! Unglücklicher Mann.'

[6] *Der junge Goethe*, II. 118: 'Mein nisus vorwärts ist so stark, dass ich mich kaum zwingen kann, Athem zu holen.'

[7] *Ibid*. IV. 118: '. . . ein Besessener, . . . dem fast in keinem Falle gestattet ist, willkürlich zu handeln . . . Hiemit will ich nicht andeuten, dass keine Veränderung zum Schöneren und Besseren in ihm möglich sey; aber nichts anders ist sie in ihm möglich, als so wie die Blume sich entfaltet, wie die Saat reift, wie der Baum in die Höhe wächst und sich krönt.'

[8] Diary, 6 Sept. 1779: 'Der Wirbel der irdischen Dinge, auch allerley anstosende Persönliche Gefühle griffen mich an. Es ziemt sich nicht diese inneren Bewegungen aufzuschreiben.'

[9] *WA*. I. 51. 88.

[10] *WA*. I. 10. 51.

[11] Diary, 13 May 1780: 'Niemand als wer sich ganz verläugnet ist werth zu herrschen und kan herrschen.'

[12] *Ibid*.

[13] Letter of 25 Mar. 1775: 'Es sieht aus als wenn die Zwirnsfädgen an denen mein Schicksaal hängt, u. die ich schon so lange in rotirender Oscillation auf und zu trille, sich endlich knüpfen wollten.'

[14] Diary, 16 Sept. 1776.

[15] Diary, 3 Aug. 1775: 'Entweder auf einem Punckt, fassend, festklammernd, oder schweifen gegen alle vier Winde!'

[16] Diary, 14 July 1779: 'Den Punckt der Vereinigung des manigfaltigen zu finden bleibt immer ein Geheimniss.'

[17] Diary, May-June 1780: '. . . alles muss zuletzt auf einen Punckt, aber Ehrne Gedult, ein steinern Aushalten.'

[18] *WA.* I. 37. 357.

[19] *WA.* I. 37. 139.

[20] Letter of 14 May 1778 to Frau von Stein: 'Es ist wenn man so durchzieht wie ein Mährgen das einem vorgetragen wird und hat ganz den Charakter der Elisischen Felder in der sachtesten Manigfaltigkeit fliest eins in das andere, keine Höhe zieht das Aug und das Verlangen auf einen einzigen Punckt, man streicht herum ohne zu fragen wo man ausgegangen ist und hinkommt.'

[21] Letter of 14 May 1779.

[22] Letter of 7 Nov. 1780.

[23] Letter of 9 Oct. 1781.

[24] Letter of 26 July 1782.

[25] Letter of 6 Jan. 1787.

[26] *WA.* IV. 6. 92.

[27] *WA.* I. 1. 335.

[28] Diary, 26 March 1780: 'Ich muss den Circkel der sich in mir umdreht, von guten und bösen Tagen, näher bemerken. . . . Erfahrung, Ausführung, Ordnung alles wechselt und hält einen regelmässigen Kreis. Heiterkeit, Trübe, Stärke, Elastizität eben so. Da ich sehr diät lebe wird der Gang nicht gestört, und ich muss noch herauskriegen in welcher Zeit und Ordnung ich um mich selbst bewege.'

[29] *WA.* I. 1. 120.

[30] Letter of 25 Jan. 1788.

[31] Letter of 1 Nov. 1786. 'Nun bin ich hier und ruhig und wie es scheint auf mein ganzes Leben beruhigt. Denn es geht, man darf wohl sagen, ein neues Leben an, wenn man das Ganze mit Augen sieht, das man Theilweise in und auswendig kennt.'

[32] Letters of 4 Nov., 2 Dec., 9 Dec., 13 Dec. 1786, and 6 Feb., 19 Feb. 1787.

[33] Letter of 20 Dec. 1786.

[34] Letter of 23 Dec. 1786.

[35] Letter of 29 Dec. 1786: 'Das gesteh ich aber auch dass ich mich aller alten Ideen, alles eignen Willens entäussere um recht wiedergebohren und neu gebildet zu werden.'

[36] *WA.* I. 31. 68. (*Italienische Reise*): 'Möge meine Existenz sich dazu genugsam entwickeln, der Stengel mehr in die Länge rücken und die Blumen reicher und schöner hervorbrechen. Gewiss es

wäre besser, ich käme gar nicht wieder, wenn ich nicht wiedergeboren zurück kommen kann.'

[37] *WA.* I. 30. 197: '. . . konnte ich mich entschliessen, einen langen einsamen Weg zu machen und den Mittelpunkt zu suchen, nach dem mich ein unwiderstehliches Bedürfnis hinzog.'

[38] *WA.* I. 31. 75: 'Der Zweifel, ob ich reisen oder bleiben sollte, machte einen Theil meines hiesigen Aufenthaltes unruhig; nun, da ich entschlossen bin, geht es besser. Für meine Sinnesart ist diese Reise heilsam, ja notwendig. Sizilien deutet mir nach Asien und Afrika, und auf dem wundersamen Punkte, wohin so viele Radien der Weltgeschichte gerichtet sind, selbst zu stehen, ist keine Kleinigkeit.'

[39] H. Trevelyan, *Goethe and the Greeks*, p. 154.

[40] *WA.* I. 32. 76: 'Von vielen Wegen rückt alles gleichsam auf *einen* Punkt zusammen, ja ich kann sagen, dass ich nun Licht sehe, wo es mit mir und meinen Fähigkeiten hinaus will. . . .'

[41] *WA.* III. 1. 251: 'Die Revolution, die ich voraussah und die jetzt in mir vorgeht, ist die in jedem Künstler enstand, der lang emsig der Natur treu war und nun die Uberbleibsel des alten grosen Geists erblickte, die Seele quoll auf und er fühlte eine innere Art von Verklärung sein selbst, ein Gefühl von freyerem Leben, höherer Existenz Leichtigkeit und Grazie.'

[42] *WA.* I. 2. 174. ('Der Wandrer'.)

[43] Quoted in Hume Brown, *The Youth of Goethe*, p. 44.

[44] Bratranck, *Goethes naturwissenschaftliche Korrespondenz*, 2. Bd. S.9: 'Nun muss aber die Zeit kommen, dass die Breite wieder in die Enge gezogen wird, dass die Hülfswissenschaften sich auf einen gewissen Mittelpunkt beziehen. . . .' (18 Jan. 1826).

[45] *WA.* II. 3. 121: 'Die Abgründe der Ahndung, ein sicheres Anschauen der Gegenwart, mathematische Tiefe, physische Genauigkeit, Höhe der Vernunft, Schärfe des Verstandes, bewegliche sehnsuchtsvolle Phantasie, liebevolle Freude zum Sinnlichen, nichts kann entbehrt werden. . . .'

[46] *WA.* II. 11. 25: '. . . dass nur das Interesse mehrerer auf *einen* Punkt gerichtet, etwas Vorzügliches hervorzubringen imstande sei.'

[47] *WA.* II. 11. 34: 'Argumente können ganz isolierte Verhältnisse enthalten, und dennoch durch Witz und Einbildungskraft auf *einen* Punkt zusammengeführt, und der Schein eines Rechts oder Unrechts . . . hervorgebracht werden.'

[48] Barker Fairley, *A Study of Goethe*, p. 208.

[49] See the section of his *Colour-Theory*: 'Nachbarliche Verhältnisse.'

[50] Barker Fairley, *op. cit.* p. 208.

[51] *WA.* II. 11. 35: 'Bei der andern Methode aber, wo wir irgend etwas, das wir behaupten, durch *isolirte Versuche* gleichsam als durch *Argumente* beweisen wollen, wird das Urtheil öfters nur *erschlichen*, wenn es nicht gar in Zweifel stehen bleibt.'

[52] *WA.* II. 13. 230: 'Vollkommenheit des Geschöpfs das nach der Mitte Base des Lebens ausgebildet ist. Unvollkommenheit, das nach den Extremitäten ausgebildet ist.'

[53] *WA.* II. 11. 74: '. . . alles fordert gleiche Rechte an einem gemeinsamen Mittelpunkt, der sein geheimes Dasein eben durch das harmonische Verhältniss zu ihm manifestirt.'

[54] *WA.* II. 11. 48.

[55] *WA.* I. 24. 181: 'Wie kann sich der Mensch gegen das Unendliche stellen, als wenn er alle geistigen Kräfte, die nach vielen Seiten hingezogen werden, in seinem Innersten, Tiefsten versammelt. . . .'

[56] *Ibid.* 'Darfst du dich in der Mitte dieser ewig lebendigen Ordnung auch nur denken, sobald sich nicht gleichfalls in dir ein beharrlich Bewegtes um einen reinen Mittelpunkt hervorthut?'

[57] *Ibid.* 'Und selbst wenn es dir schwer würde, diesen Mittelpunkt in deinem Busen aufzufinden, so würdest du ihn daran erkennen, dass eine wohlwollende, wohlthätige Wirkung von ihm ausgeht und von ihm Zeugnis gibt.'

[58] *WA.* I. 25 (I) 25: 'Diese Lichter, die bei Tag und bei Nacht im ganzen Jahre unter der Erde leuchten und wirken und die Fördernis versteckter, kaum erreichbarer irdischer Schätze begünstigen, diese quellen und wallen gegenwärtig aus ihren Schlünden hervor und erheitern die offenbare Nacht. Kaum gewahrte man je eine so erfreuliche Heerschau, wo das nützlichste, unterirdisch zerstreute, den Augen entzogene Geschäft sich uns in ihrer ganzen Fülle zeigt und eine grosse geheime Vereinigung sichtbar macht.'

[59] *Ibid.* 'Hohle Felsmassen zogen maschinenhaft heran und schlossen bald ein glänzendes Innere dem Auge des erfreuten Zuschauers auf.'

[60] *Ibid.* 'Viel freundlicher, als wenn ein Vulkan sich auftut und sein sprühendes Getös ganze Gegenden mit Untergang bedroht, zeigte sich diese Erscheinung, und doch glühte sie nach und nach mächtiger, breiter und gedrängter, funkelte wie ein Strom von Sternen, war sanft und lieblich, aber doch kühn uber die ganze Gegend sich verbreitend.'

[61] *WA.* I. 16. 173.

[62] Letter of 6 April 1801.

[63] Zetzner, *Theatrum chemicum*, vol. IV, p. 57.
[64] See p. 151 above.
[65] See p. 31 above.
[66] *The Zohar*, transl. Sperling and Simon, vol. I, pp. 84-8.
[67] *Ibid.* p. 89.
[68] Zetzner, *op. cit.* vol. 4, p. 522.
[69] Quoted in *KKH.* II. 427: '. . . dieweil uns Christen das einige centrum und ursprung aller dinge in Trigono centri, oder Trinitate divinae veritatis, sich selbst offenbahret und zu erkennen gegeben hat. . . .'
[70] *The Hermetic Museum*, vol. I, p. 53.

CHAPTER IX

[1] See *Goethes Werke, Jubiläumsausgabe*, 14.Bd. S. 331.
[2] From the English translation (London, 1650), pp. 8-9.
[3] *Chymical Wedding*, pp. 199-200.
[4] *Ibid.* p. 203.
[5] *Ibid.* p. 204.
[6] Zetzner, *op. cit.* vol. IV, p. 504: 'ut ex eo proles nova nascatur.'
[7] *Ibid.* vol. IV, p. 503.
[8] *Ibid.* vol. IV, p. 69.
[9] *Ibid.* vol. IV, p. 94.
[10] *O.M-C.* p. 264.
[11] Starkey, *Secrets Reveal'd*, p. 16.
[12] Quoted in Read, *Prelude to Chemistry*, p. 150. My italics.
[13] Campbell Brown, *History of Chemistry*, p. 157.
[14] Transl. G. Goldschmidt in Ruska, *Studien zur Geschichte der Chemie*, p. 25: '. . . ziehe mich von klein auf; ich bin ein winziges Knäblein, bis die Kraft kommt, die mich erstärken lässt und mich zur Mannbarkeit führt.'
[15] Zetzner, *op. cit.* vol. IV, p. 260.

'Solvier, fewl, wasch, Coagulier,
Biss sich der güldin jung figier, . . .
So wird der Leibgeist gesewret wol,
Zum Werck bereit der ferben sol
Die sechs unzeitigen Metall,
Durch Kunst auch heylen alle qual.'

[16] *RR.* pp. 114-16.
[17] *KKH.* II. 1156: 'es wird in ihme gebohren der Tag der Freuden . . . CHRISTUS.'
[18] Latham, *Goethes Faust*, Notes on Part 2, p. 446.

[19] Quoted in *KKH.* II. 1376.
[20] Witkowski, *Erläuterungen zu Faust*, II. 328. (9th ed. 1936.)
[21] Ruska, *op. cit.* p. 25: 'Schliesslich gewinnt das göttliche Nass meiner Natur Macht, so dass ich die Beschaffenheit der Elemente wohlgemischt in mir enthalte, in einer geradezu übernatürlichen Weise.'

CHAPTER X

[1] *Secrets Reveal'd*, p. 2.
[2] *Vom dreifachen Leben*, ch. VI, para. 68.
[3] *Enarratio methodica*, p. 22.
[4] G. Arnold, *Das Geheimniss der göttlichen Sophia oder Weissheit*, Leipzig, 1700, ch. VI, para. 11: 'nemlich als eine jungfrau, als ein bräutigam, oder auch als eine mutter, usw.'
[5] *The Zohar*, vol. I, p. 353.
[6] *RR.* p. 116.
[7] *Ibid.* p. 187.
[8] *The Hermetic Museum*, vol. I, p. 46.
[9] See Harry Mayne, introduction to *Wilhelm Meisters Theatralische Sendung*, Stuttgart, 1911, p. xi.
[10] *WA.* I. 24. 354.
[11] *WA.* I. 21. 33: 'Besonders fesselte mich Chlorinde mit ihrem ganzen Tun und Lassen. Die Mannweiblichkeit, die ruhige Fülle ihres Daseins taten mehr Wirkung auf den Geist, der sich zu entwickeln anfing, als die gemachten Reize Armidens, ob ich gleich ihren Garten nicht verachtete.'
[12] *WA.* I. 22. 57: 'Er sah das umhüllende Kleid von ihren Schultern fallen, ihr Gesicht, ihre Gestalt glänzend verschwinden. Alle seine Jugendträume knüpften sich an dieses Bild. Er glaubte nunmehr die edle, heldenmutige Chlorinde mit eigenen Augen gesehen zu haben. . . .'
[13] *WA.* I. 21. 106 and 23. 303.
[14] *WA.* I. 21. 106: 'Wie jammerte mich, wie jammert mich noch ein Jüngling, der die süssen Triebe, das schönste Erbteil, das uns die Natur gab, in sich verschliessen und das Feuer, das ihn und andere erwärmen und beleben sollte, in seinem Busen verbergen muss, so dass sein Innerstes unter ungeheuren Schmerzen verzehrt wird!'
[15] *WA.* I. 22. 58: ' Ihm fiel der kranke Königssohn wieder ein, an dessen Lager die schöne teilnehmende Prinzessin mit stiller Bescheidenheit herantritt.'

[16] *WA.* I. 23. 303: 'Wie heisst der Ziegenbart mit der Krone dort, der sich am Fusse des Bettes um seinen kranken Sohn abhärmt? Wie heisst die Schöne, die hereintritt und in ihren sittsamen Schelmenaugen Gift und Gegengift zugleich führt?'

[17] *RR.* p. 242.

[18] *Ibid.*

[19] Quoted in Berthelot, *Origines de l'Alchimie*, p. 231.

[20] M. Ruland, *Lexicon alchemiae.* Quoted in Ruska, *Studien zur Geschichte der Chemie*, p. 22: 'Er frist den Mercurium als ein Gifft und stirbt, saufft ihn wiederumb und wirdt lebendig, und so legt er ab alle unreinigkeit, dan er wirdt weiss unnd lebt.'

[21] *Pandora*, line 692, *WA.* I. 50. 330.

[22] Gundolf, *Goethe*, p. 594: 'Die zweite Pandora ist göttlichen, d.h. kosmischen Ursprungs, für die Menschen zugleich Gegensatz und Ergänzung, Gefahr und Lockung.'

[23] *WA.* I. 40. 368: 'Wir hätten aber doch dieses Werk lieber "Bekenntnisse einer Amazone" überschrieben. . . . Denn es zeigt sich hier wirklich eine Männin, . . . eine Jungfrau, ein Virago im besten Sinne, die wir schätzen und ehren, ohne eben von ihr angezogen zu werden.'

[24] *WA.* I. 22. 65.

[25] *WA.* I. 23. 33: 'sie beschämt hundert Männer, und ich möchte sie eine wahre Amazone nennen, wenn andere nur als artige Hermaphroditen in dieser zweideutigen Kleidung herumgehen.'

[26] *WA.* I. 51. 67. (*Wilhelm Meisters Theatralische Sendung.*)

[27] *WA.* I. 21. 98.

[28] *WA.* I. 21. 4.

[29] *WA.* I. 24. 355: 'Kräftig charakterisiert war die grimmige Enge dieser Felsmassen; die alles durchschneidenden schwarzen Schluchten, zusammengetürmt, allen Ausang zu hindern drohend, hätte nicht eine kühne Brücke auf die Möglichkeit, mit der übrigen Welt in Verbindung zu gelangen, hingedeutet. Auch liess der Künstler mit klugdichtendem Wahrheitssinne eine Höhle merklich werden, die man als Naturwerkstatt mächtiger Kristalle oder als Aufenthalt einer fabelhaft-furchtbaren Drachenbrut ansprechen konnte.'

[30] *Die natürliche Tochter*, line 2942, *WA.* I. 10. 382.

[31] *Ibid.* line 128.

[32] *WA.* I. 50. 283.

[33] *Ibid.* lines 1386-7.

[34] *WA.* I. 25 (II). 12.

[35] *WA.* I. 24. 174.

[36] *WA.* II. 12. 102: 'Es ist offenbar, dass das, was wir Elemente nennen, seinen eigenen wilden wüsten Gang zu nehmen immerhin den Trieb hat. . . . Die Elemente sind daher als colossale Gegner zu betrachten, mit denen wir ewig zu kämpfen haben, und sie nur durch die höchste Kraft des Geistes, durch Muth und List, im einzelnen Fall bewältigen.'

[37] Max Morris, *Der junge Goethe*, vol. v, p. 7: 'Meine Teure, ich will Ihnen keinen anderen Namen geben, denn was sind die Nahmen Freundinn, Schwester, Geliebte, Braut, Gattin, oder ein Wort das einen Complex von allen denen Nahmen begriffe.'

[38] *WA.* IV. 3. 51. (April 1776?): 'Ich kann mir die Bedeutsamkeit —die Macht, die diese Frau über mich hat, anders nicht erklären, als durch die Seelenwanderung.—Ja, wir waren einst Mann und Weib!—Nun wissen wir von uns—verhüllt, in Geisterduft.—Ich habe keinen Namen für uns—die Vergangenheit—die Zukunft—das All.'

[39] E.g. letters of 13 Feb. 1781, 7 March 1782.

[40] Letter of 10 Apr. 1782: 'Du bist mir in alle Gegenstände transubstanziirt, ich seh alles recht gut und sehe dich doch überall. . . .'

[41] *Iphigenie auf Tauris*, line 777.

[42] *WA.* I. 39. 351.

[43] *WA.* I. 30. 68. (*Italienische Reise.*)

[44] *WA.* III. 1. 306: 'Er hat ihr eine gesunde, sichre Jungfräulichkeit gegeben ohne Reitz, doch ohne Kälte und Roheit.'

[45] *WA.* II. 5. 300: 'Der Vollmond steht der Sonne nicht feindlich entgegen, sondern sendet ihr gefällig das Licht zurück das sie ihm verlieh; es ist Artemis die freundlich und sehnsuchtsvoll den Bruder anblickt.'

[46] *WA.* I. 25(I) 81: 'Und nun geht's da wieder an, der Vater und der Sohn!'

[47] *WA.* I. 13. 7.

[48] *WA.* I. 25(I) 33: 'Ich komme mir vor wie eine unschuldige Alkmene, die von zwei Wesen, die einander vorstellen, unablässig heimgesucht wird.'

[49 *WA.* 24. 240: '. . . dass ein Gott da droben sei, der sich in Eltern, Lehrern, Vorgesetzten abbildet und offenbart.'

[50] *Pandora*, line 413, *WA.* I. 50. 316.

[51] *WA.* I. 24. 323. 'Fur Hilarien freilich blieb die Ähnlichkeit des jugendlichen Vaterbildes mit der frischen Lebensgegenwart des Sohnes unheimlich, ja bedrängend.'

[52] C. G. Jung, *Psychologie der Übertragung. . . .*, p. 90.

[53] *WA.* I. 26. 92. (*Dichtung und Wahrheit.*)
[54] *WA.* I. 25(I). 15.
[55] *WA.* III. 1. 229.
[56] *WA.* III. 1. 266.
[57] *WA.* II. 3. 141-2.
[58] *WA.* II. 11. 128: 'Es gibt eine zarte Empirie, die sich mit dem Gegenstand innigst identisch macht, und dadurch zur eigentlichen Theorie wird. Diese Steigerung des geistigen Vermögens aber gehört einer hochgebildeten Zeit an.'
[59] *WA.* I. 25(I) 272: 'Diese beiden Welten gegeneinander zu bewegen, ihre beiderseitigen Eigenschaften in der vorübergehenden Lebenserscheinung zu manifestiren, das ist die höchste Gesatlt, wozu sich der Mensch auszubilden hat.'

CHAPTER XI

[1] E. Starkie, *Arthur Rimbaud*, p. 129.
[2] Goethe, *Novelle.*
[3] *WA.* II. 2. 18.

BOOKS AND ARTICLES CONSULTED

ABBREVIATIONS

A.C.H. See 3a. Kirchweger, J. *Aurea Catena Homeri.*
E.G.S. Publications of the *English Goethe Society.*
G.J.B. *Goethe Jahrbuch.*
J.G.G. *Jahrbuch der Goethe-Gesellschaft.*
KKH. See 3a. Arnold, G. *Unpartheyische Kirchen und Ketzer-historie.*
O.M-C. See 3a. Welling, G. von, *Opus Mago-Cabbalisticum.*
RR. See 3a. Starkey, *Ripley Reviv'd.*
V.G.G. *Viermonatsschrift der Goethe-Gesellschaft.*
WA. See 1a. Weimarer Ausgabe of Goethe's works. The Roman numerals refer to the Abteilung, the first Arabic numerals to the volume, the second to the page.

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